



STIC Search Report

Biotech-Chem Library

STIC Database Tracking Number: 163653

TO: Nita M Minnifield
Location: 3c01 / 3c18
Wednesday, August 31, 2005
Art Unit: 1645
Phone: 571-272-0860
Serial Number: 10 / 680349

From: Jan Delaval
Location: Biotech-Chem Library
Remsen 1a51
Phone: 571-272-2504

jan.delaval@uspto.gov

Search Notes

*Reviewed
2/06
mm*

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STIC-Biotech/ChemLib

163653

From: Minnifield, Nita
Sent: Wednesday, August 24, 2005 12:48 PM
To: STIC-Biotech/ChemLib
Subject: interference sequence search request

10/680349

STIC

Please do an interference sequence search on SEQ ID NO: 41, 42
and aa 61-86 of SEQ ID NO: 42 of this application.

Please provide a paper copy of all results.

Thanks,
Minnifield,
71976
Art Unit 1645
Office REM-3C01
Mailbox REM-3C18
571-272-0860

STAFF USE ONLY

Searcher: C. Jan
Searcher Phone: 2- 2504
Date Searcher Picked up: 8/24/05
Date Completed: 8/31/05
Searcher Prep/Rev. Time: 15
Online Time: 20

Type of Search

NA#: ✓ AA#: ✓
Interference: ✓ SPDI: ✓
S/L: Oligomer:
Encode/Transl:
Structure#: Text:
Inventor: Litigation:

Vendors and cost where applicable

STN:
DIALOG:
QUESTEL/ORBIT:
LEXIS/NEXIS:
SEQUENCE SYSTEM: ✓
WWW/Internet:
Other(Specify):

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GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.

OM nucleic - nucleic search, using sw model

Run on: August 30, 2005, 07:20:11 ; Search time 650 Seconds
(without alignments)
8455.685 Million cell updates/sec

Title: US-10-680-349-41

Perfect score: 840

Sequence: 1 atgaattataagaaattctt.....ttggaatgaggttcaccttc 840

Scoring table: IDENTITY NUC

Gapop 10.0 , Gapext 1.0

Searched: 7331713 seqs, 327154945 residues

Total number of hits satisfying chosen parameters: 14663426

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Published Applications NA:*

- 1: /cgn2_6/ptodata/2/pubpna/US07_PUBCOMB.seq:*
- 2: /cgn2_6/ptodata/2/pubpna/PCT_NEW_PUB.seq:*
- 3: /cgn2_6/ptodata/2/pubpna/US06_NEW_PUB.seq:*
- 4: /cgn2_6/ptodata/2/pubpna/US06_PUBCOMB.seq:*
- 5: /cgn2_6/ptodata/2/pubpna/US07_NEW_PUB.seq:*
- 6: /cgn2_6/ptodata/2/pubpna/PCTUS_PUBCOMB.seq:*
- 7: /cgn2_6/ptodata/2/pubpna/US08_NEW_PUB.seq:*
- 8: /cgn2_6/ptodata/2/pubpna/US09A_PUBCOMB.seq:*
- 9: /cgn2_6/ptodata/2/pubpna/US09B_PUBCOMB.seq:*
- 10: /cgn2_6/ptodata/2/pubpna/US09C_PUBCOMB.seq:*
- 11: /cgn2_6/ptodata/2/pubpna/US09D_PUBCOMB.seq:*
- 12: /cgn2_6/ptodata/2/pubpna/US09E_PUBCOMB.seq:*
- 13: /cgn2_6/ptodata/2/pubpna/US10A_PUBCOMB.seq:*
- 14: /cgn2_6/ptodata/2/pubpna/US10B_PUBCOMB.seq:*
- 15: /cgn2_6/ptodata/2/pubpna/US10C_PUBCOMB.seq:*
- 16: /cgn2_6/ptodata/2/pubpna/US10D_PUBCOMB.seq:*
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- 18: /cgn2_6/ptodata/2/pubpna/US10F_PUBCOMB.seq:*
- 19: /cgn2_6/ptodata/2/pubpna/US10G_PUBCOMB.seq:*
- 20: /cgn2_6/ptodata/2/pubpna/US10H_PUBCOMB.seq:*
- 21: /cgn2_6/ptodata/2/pubpna/US10I_PUBCOMB.seq:*
- 22: /cgn2_6/ptodata/2/pubpna/US10J_PUBCOMB.seq:*
- 23: /cgn2_6/ptodata/2/pubpna/US11A_PUBCOMB.seq:*
- 24: /cgn2_6/ptodata/2/pubpna/US11_NEW_PUB.seq:*
- 25: /cgn2_6/ptodata/2/pubpna/US60_NEW_PUB.seq:*
- 26: /cgn2_6/ptodata/2/pubpna/US60_PUBCOMB.seq:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	840	100.0	840	10	US-09-811-007-41
2	840	100.0	840	13	US-10-062-624-41
3	840	100.0	840	14	US-10-062-051-41
4	840	100.0	840	14	US-10-062-920-41
5	840	100.0	840	19	US-10-680-349-41
6	840	100.0	840	20	US-10-731-554-41
7	840	100.0	843	13	US-10-059-964-47

8	840	100.0	843	15	US-10-314-639-47	Sequence 47, Appl
9	840	100.0	843	20	US-10-901-714-47	Sequence 47, Appl
10	840	100.0	843	20	US-10-901-774-47	Sequence 47, Appl
11	598.6	71.3	852	13	US-10-059-964-3	Sequence 3, Appli
12	598.6	71.3	852	15	US-10-314-639-3	Sequence 3, Appli
13	598.6	71.3	852	20	US-10-901-714-3	Sequence 3, Appli
14	598.6	71.3	852	20	US-10-901-774-3	Sequence 3, Appli
15	243.4	29.0	849	22	US-10-138-162-48	Sequence 48, Appl
16	238.4	28.4	924	13	US-10-059-964-35	Sequence 35, Appl
17	238.4	28.4	924	15	US-10-314-639-35	Sequence 35, Appl
18	238.4	28.4	924	20	US-10-901-714-35	Sequence 35, Appl
19	238.4	28.4	924	20	US-10-901-774-35	Sequence 35, Appl
20	238.4	28.4	1607	10	US-09-811-007-1	Sequence 1, Appli
21	238.4	28.4	1607	13	US-10-062-624-1	Sequence 1, Appli
22	238.4	28.4	1607	14	US-10-062-051-1	Sequence 1, Appli
23	238.4	28.4	1607	14	US-10-062-920-1	Sequence 1, Appli
24	238.4	28.4	1607	19	US-10-680-349-1	Sequence 1, Appli
25	238.4	28.4	1607	20	US-10-731-554-1	Sequence 1, Appli
26	238.4	28.4	1607	22	US-10-138-162-47	Sequence 47, Appl
27	234	27.9	840	10	US-09-811-007-5	Sequence 5, Appli
28	234	27.9	840	13	US-10-062-624-5	Sequence 5, Appli
29	234	27.9	840	14	US-10-062-051-5	Sequence 5, Appli
30	234	27.9	840	14	US-10-062-920-5	Sequence 5, Appli
31	234	27.9	840	19	US-10-680-349-5	Sequence 5, Appli
32	234	27.9	840	20	US-10-731-554-5	Sequence 5, Appli
33	234	27.9	846	20	US-10-901-714-1	Sequence 1, Appli
34	234	27.9	846	20	US-10-901-774-1	Sequence 1, Appli
35	232.4	27.7	843	13	US-10-059-964-37	Sequence 37, Appl
36	232.4	27.7	843	15	US-10-314-639-37	Sequence 37, Appl
37	232.4	27.7	843	20	US-10-901-714-37	Sequence 37, Appl
38	232.4	27.7	843	20	US-10-901-774-37	Sequence 37, Appl
39	232.4	27.7	846	13	US-10-059-964-1	Sequence 1, Appli
40	232.4	27.7	846	15	US-10-314-639-1	Sequence 1, Appli
41	228.6	27.2	830	13	US-10-062-994-11	Sequence 11, Appl
42	228.6	27.2	830	13	US-10-062-994-11	Sequence 11, Appl
43	228.6	27.2	830	19	US-10-722-077-11	Sequence 11, Appl
44	217.4	25.9	867	13	US-10-059-964-31	Sequence 31, Appl
45	217.4	25.9	867	15	US-10-314-639-31	Sequence 31, Appl

ALIGNMENTS

RESULT 1
US-09-811-007-41
; Sequence 41, Application US/09811007
; Publication No. US20030185849A1
; GENERAL INFORMATION: David H.
; APPLICANT: Walker, Jere W.
; APPLICANT: Yu, Xue-Jie
; TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein
; TITLE OF INVENTION: Genes of Ehrlichia canis and Uses Thereof
; FILE REFERENCE: D6152CIP2
; CURRENT APPLICATION NUMBER: US/09/811,007
; PRIOR FILING DATE: 2001-03-16
; PRIOR APPLICATION NUMBER: 09/660,587
; NUMBER OF SEQ ID NOS: 46
; SEQ ID NO 41
; LENGTH: 840
; TYPE: DNA
; ORGANISM: Ehrlichia canis
; FEATURE:
; OTHER INFORMATION: nucleic acid sequence of E. canis p28-2
US-09-811-007-41

Query Match 100.0%; Score 840; DB 10; Length 840;
Best Local Similarity 100.0%; Pred. No. 8e-172;
Matches 840; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Qy 1 ATGAATTATAGAAATCTTAGTAAGCGCGTATCTCAATTAATGTCATCTTACCA 60
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Db      1  ATGAATTATAAGAAAAATTTCTAGTAAGAAGCGGTTAATCTCATTTAATGTCAATCTTACCA 60
Qy      61  TATCAGTCTTTTGCAGATCTCTGATAGTTTCAAGAACTAATGATTAACAAGAAGCGTTCTTAC 120
Db      61  TATCAGTCTTTTGCAGATCTCTGATAGTTTCAAGAACTAATGATTAACAAGAAGCGTTCTTAC 120
Qy     121  ATTAGTCAAAAGTACAACTCAAGTATATACACTTTTAGAAAAATTTCTCTGCTGAAGAACT 180
Db     121  ATTAGTCAAAAGTACAACTCAAGTATATACACTTTTAGAAAAATTTCTCTGCTGAAGAACT 180
Qy     181  CCTATTAAATGGAACAAATTTCTCTCACTAAAGAGTTTTTCGGACTAAAGAAAGATGGTGAT 240
Db     181  CCTATTAAATGGAACAAATTTCTCTCACTAAAGAGTTTTTCGGACTAAAGAAAGATGGTGAT 240
Qy     241  ATACAAAAAAGACGATTTTACAGAGTAGTCTCAGGCAATTGATTTTCAAAATAACTTAA 300
Db     241  ATACAAAAAAGACGATTTTACAGAGTAGTCTCAGGCAATTGATTTTCAAAATAACTTAA 300
Qy     301  ATATCAGGATTTTCAGGAAGTATTGGTTACTCTATGACGACCAAGAAATAGAACTTGAA 360
Db     301  ATATCAGGATTTTCAGGAAGTATTGGTTACTCTATGACGACCAAGAAATAGAACTTGAA 360
Qy     361  GCTGCATATCAACAATTTAATCCAAAAACACCGATTAACATGATCTGATAATGGTGAA 420
Db     361  GCTGCATATCAACAATTTAATCCAAAAACACCGATTAACATGATCTGATAATGGTGAA 420
Qy     421  TACTATAAACATTTTGCATTTATCTGTAAGATGCAATGGAAGATCAGCAATATGTAGTA 480
Db     421  TACTATAAACATTTTGCATTTATCTGTAAGATGCAATGGAAGATCAGCAATATGTAGTA 480
Qy     481  CTTAAAAATGACGCGCATAACTTTTATGCTGATGTTAATCTTATGCTATGACATTACA 540
Db     481  CTTAAAAATGACGCGCATAACTTTTATGCTGATGTTAATCTTATGCTATGACATTACA 540
Qy     541  GCTGAAGAGTATCTTTTCGTAACCATATGCAATGCAAGTATAGAGCAGATCTTATCACT 600
Db     541  GCTGAAGAGTATCTTTTCGTAACCATATGCAATGCAAGTATAGAGCAGATCTTATCACT 600
Qy     601  ATTTTAAAGACCTCAATCTAAATTTGCTTACCAAGGAAAAATAGTATTAGTTACCCCT 660
Db     601  ATTTTAAAGACCTCAATCTAAATTTGCTTACCAAGGAAAAATAGTATTAGTTACCCCT 660
Qy     661  ATCACACAGAGTCTCTGCAATTTATTTGGTGGATCTACCATGCGGTTATTGGTAATAAA 720
Db     661  ATCACACAGAGTCTCTGCAATTTATTTGGTGGATCTACCATGCGGTTATTGGTAATAAA 720
Qy     721  TTTGAGAAGATACCTGTAATAACTCTCTGATGATTAATAATGATGCTCTCAAAACCATCT 780
Db     721  TTTGAGAAGATACCTGTAATAACTCTCTGATGATTAATAATGATGCTCTCAAAACCATCT 780
Qy     781  GCTTCAGTAACCTTTGACGTTGGATCTTTGGCGGAGAAATTTGGAATGAGGTTCCACCTTC 840
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RESULT 2

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US-10-62-624-41
; Sequence 41, Application US/10062624
; Publication No. US20020115840A1
; GENERAL INFORMATION:
; APPLICANT: Walker, David H.
; APPLICANT: McBride, Jere W.
; APPLICANT: Yu, Xue-jie
; TITLE OF INVENTION: Homologous 28-Kilodalton Immunodominant Protein
; FILE OF INVENTION: Genes of Ehrlichia canis and Uses Thereof
; FILE REFERENCE: D6152CIP2/D1
; CURRENT APPLICATION NUMBER: US/10/062,624
; PRIOR FILING DATE: 2002-01-31
; PRIOR APPLICATION NUMBER: 09/660,587
; PRIOR FILING DATE: 2000-09-12
; NUMBER OF SEQ ID NOS: 46
; SEQ ID NO 41
; LENGTH: 840
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; TYPE: DNA
; ORGANISM: Ehrlichia canis
; FEATURE:
; OTHER INFORMATION: nucleic acid sequence of E. canis p28-2
US-10-062-624-41
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Query Match      100.0%; Score 840; DB 13; Length 840;
Best Local Similarity 100.0%; Pred. No. 8e-172;
Matches 840; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy      1  ATGAATTATAAGAAAAATTTCTAGTAAGAAGCGGTTAATCTCATTTAATGTCAATCTTACCA 60
Db      1  ATGAATTATAAGAAAAATTTCTAGTAAGAAGCGGTTAATCTCATTTAATGTCAATCTTACCA 60
Qy     61  TATCAGTCTTTTGCAGATCTCTGATAGTTTCAAGAACTAATGATTAACAAGAAGCGTTCTTAC 120
Db     61  TATCAGTCTTTTGCAGATCTCTGATAGTTTCAAGAACTAATGATTAACAAGAAGCGTTCTTAC 120
Qy     121  ATTAGTCAAAAGTACAACTCAAGTATATACACTTTTAGAAAAATTTCTCTGCTGAAGAACT 180
Db     121  ATTAGTCAAAAGTACAACTCAAGTATATACACTTTTAGAAAAATTTCTCTGCTGAAGAACT 180
Qy     181  CCTATTAAATGGAACAAATTTCTCTCACTAAAGAGTTTTTCGGACTAAAGAAAGATGGTGAT 240
Db     181  CCTATTAAATGGAACAAATTTCTCTCACTAAAGAGTTTTTCGGACTAAAGAAAGATGGTGAT 240
Qy     241  ATACAAAAAAGACGATTTTACAGAGTAGTCTCAGGCAATTGATTTTCAAAATAACTTAA 300
Db     241  ATACAAAAAAGACGATTTTACAGAGTAGTCTCAGGCAATTGATTTTCAAAATAACTTAA 300
Qy     301  ATATCAGGATTTTTCAGGAAGTATTGGTTACTCTATGACGACCAAGAAATAGAACTTGAA 360
Db     301  ATATCAGGATTTTTCAGGAAGTATTGGTTACTCTATGACGACCAAGAAATAGAACTTGAA 360
Qy     361  GCTGCATATCAACAATTTAATCCAAAAACACCGATTAACATGATCTGATAATGGTGAA 420
Db     361  GCTGCATATCAACAATTTAATCCAAAAACACCGATTAACATGATCTGATAATGGTGAA 420
Qy     421  TACTATAAACATTTTGCATTTATCTGTAAGATGCAATGGAAGATCAGCAATATGTAGTA 480
Db     421  TACTATAAACATTTTGCATTTATCTGTAAGATGCAATGGAAGATCAGCAATATGTAGTA 480
Qy     481  CTTAAAAATGACGCGCATAACTTTTATGCTGATGTTAATCTTATGCTATGACATTACA 540
Db     481  CTTAAAAATGACGCGCATAACTTTTATGCTGATGTTAATCTTATGCTATGACATTACA 540
Qy     541  GCTGAAGAGTATCTTTTCGTAACCATATGCAATGCAAGTATAGAGCAGATCTTATCACT 600
Db     541  GCTGAAGAGTATCTTTTCGTAACCATATGCAATGCAAGTATAGAGCAGATCTTATCACT 600
Qy     601  ATTTTAAAGACCTCAATCTAAATTTGCTTACCAAGGAAAAATAGTATTAGTTACCCCT 660
Db     601  ATTTTAAAGACCTCAATCTAAATTTGCTTACCAAGGAAAAATAGTATTAGTTACCCCT 660
Qy     661  ATCACACAGAGTCTCTGCAATTTATTTGGTGGATCTACCATGCGGTTATTGGTAATAAA 720
Db     661  ATCACACAGAGTCTCTGCAATTTATTTGGTGGATCTACCATGCGGTTATTGGTAATAAA 720
Qy     721  TTTGAGAAGATACCTGTAATAACTCTCTGATGATTAATAATGATGCTCTCAAAACCATCT 780
Db     721  TTTGAGAAGATACCTGTAATAACTCTCTGATGATTAATAATGATGCTCTCAAAACCATCT 780
Qy     781  GCTTCAGTAACCTTTGACGTTGGATCTTTGGCGGAGAAATTTGGAATGAGGTTCCACCTTC 840
Db     781  GCTTCAGTAACCTTTGACGTTGGATCTTTGGCGGAGAAATTTGGAATGAGGTTCCACCTTC 840
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RESULT 3

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US-10-062-051-41
; Sequence 41, Application US/10062051
; Publication No. US20030073095A1
; GENERAL INFORMATION:
; APPLICANT: Walker, David H.
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APPLICANT: McBride, Jere W.
APPLICANT: Yu, Xue-Jie
TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein
FILE REFERENCE: D6152CIP2
CURRENT APPLICATION NUMBER: US/10/062,051
CURRENT FILING DATE: 2002-01-31
PRIOR APPLICATION NUMBER: US/09/660,587
PRIOR FILING DATE: 2000-09-12
PRIOR APPLICATION NUMBER: 09/261,358
PRIOR FILING DATE: 1999-03-03
NUMBER OF SEQ ID NOS: 46
SEQ ID NO 41
LENGTH: 840
TYPE: DNA
ORGANISM: Ehrlichia canis
FEATURE:
OTHER INFORMATION: nucleic acid sequence of E. canis p28-2
US-10-062-051-41

Query Match 100.0%; Score 840; DB 14; Length 840;
Best Local Similarity 100.0%; Pred. No. 8e-172;
Matches 840; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 ATGAATTATAGAAAATCTTAGTAAGAGCGGTTAATCTCAATTAATGTCAATCTTACCA 60
Db 1 ATGAATTATAGAAAATCTTAGTAAGAGCGGTTAATCTCAATTAATGTCAATCTTACCA 60

Qy 61 TATCAGTCTTTTGCAGATCCTGTAGTTCAAGAACTAATGATACAAAGAGGCTTCTAC 120
Db 61 TATCAGTCTTTTGCAGATCCTGTAGTTCAAGAACTAATGATACAAAGAGGCTTCTAC 120

Qy 121 ATTAGTGCAAAGTCAATCCAAAGTATATACACTTTAGAAAATTTCTGCTGAAGAACT 180
Db 121 ATTAGTGCAAAGTCAATCCAAAGTATATACACTTTAGAAAATTTCTGCTGAAGAACT 180

Qy 181 CCTATTATGAACAAATTTCTCACTAAAAAGTTTTCGACATAAAGAGATGGTGAT 240
Db 181 CCTATTATGAACAAATTTCTCACTAAAAAGTTTTCGACATAAAGAGATGGTGAT 240

Qy 241 ATACAAAAAAGACGATTTTACAGAGTAGCTCCAGGATTTGATTTTCAAAAATTAACCTTA 300
Db 241 ATACAAAAAAGACGATTTTACAGAGTAGCTCCAGGATTTGATTTTCAAAAATTAACCTTA 300

Qy 301 ATATCAGGATTTTTCAGGAAGTATTTGTTTACTCTATGAGACGACCAAGATAGAACTTGA 360
Db 301 ATATCAGGATTTTTCAGGAAGTATTTGTTTACTCTATGAGACGACCAAGATAGAACTTGA 360

Qy 361 GCTGCATATCAACAAATTTAATCCAAAAACACCGATACCAATGATGATAATGGTGAA 420
Db 361 GCTGCATATCAACAAATTTAATCCAAAAACACCGATACCAATGATGATAATGGTGAA 420

Qy 421 TACTATAAACATTTTGCATTAATTTATGCTGATGTTAATCTTGTATGATGATGATGATG 480
Db 421 TACTATAAACATTTTGCATTAATTTATGCTGATGTTAATCTTGTATGATGATGATGATG 480

Qy 481 ATCAACACAGAGTCTCTGCAATTTATGCTGATGATGATGATGATGATGATGATGATG 540
Db 481 ATCAACACAGAGTCTCTGCAATTTATGCTGATGATGATGATGATGATGATGATGATG 540

Qy 541 GCTGAAGAGTATCTTTGATGATGATGATGATGATGATGATGATGATGATGATGATG 600
Db 541 GCTGAAGAGTATCTTTGATGATGATGATGATGATGATGATGATGATGATGATGATG 600

Qy 601 ATTTTAAAGACCTCAATCTAAATTTGCTTACCAAGGAAATAGGTATGATGATGATG 660
Db 601 ATTTTAAAGACCTCAATCTAAATTTGCTTACCAAGGAAATAGGTATGATGATGATGATG 660

Qy 661 ATCAACACAGAGTCTCTGCAATTTATGCTGATGATGATGATGATGATGATGATGATG 720
Db 661 ATCAACACAGAGTCTCTGCAATTTATGCTGATGATGATGATGATGATGATGATGATG 720

Qy 721 TTTGAGAGATACCTGTAAATTAACCTCTGTAGTATTAATGATGCTCTCAACACCATCT 780

Db 721 TTTGAGAGATACCTGTAAATTAACCTCTGTAGTATTAATGATGCTCTCAACACCATCT 780
Qy 781 GCTTCAGTAATCTTTGACGTTGGATACCTTTGGCGGAGAAAATGGAATGAGTTTCACTTC 840
Db 781 GCTTCAGTAATCTTTGACGTTGGATACCTTTGGCGGAGAAAATGGAATGAGTTTCACTTC 840

RESULT 4
US-10-062-920-41
Sequence 41, Application US/10062920
Publication No. US20030096250A1
GENERAL INFORMATION:
APPLICANT: Walker, David H.
APPLICANT: McBride, Jere W.
APPLICANT: Yu, Xue-Jie
TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein
FILE REFERENCE: D6152CIP2
CURRENT APPLICATION NUMBER: US/10/062,920
CURRENT FILING DATE: 2002-01-31
PRIOR APPLICATION NUMBER: US/09/660,587
PRIOR FILING DATE: 2000-09-12
PRIOR APPLICATION NUMBER: 09/261,358
PRIOR FILING DATE: 1999-03-03
NUMBER OF SEQ ID NOS: 46
SEQ ID NO 41
LENGTH: 840
TYPE: DNA
ORGANISM: Ehrlichia canis
FEATURE:
OTHER INFORMATION: nucleic acid sequence of E. canis p28-2
US-10-062-920-41

Query Match 100.0%; Score 840; DB 14; Length 840;
Best Local Similarity 100.0%; Pred. No. 8e-172;
Matches 840; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 ATGAATTATAGAAAATTTCTAGTAAGAGCGGTTAATCTCAATTAATGTCAATCTTACCA 60
Db 1 ATGAATTATAGAAAATTTCTAGTAAGAGCGGTTAATCTCAATTAATGTCAATCTTACCA 60

Qy 61 TATCAGTCTTTTGCAGATCCTGTAGTTCAAGAACTAATGATACAAAGAGGCTTCTAC 120
Db 61 TATCAGTCTTTTGCAGATCCTGTAGTTCAAGAACTAATGATACAAAGAGGCTTCTAC 120

Qy 121 ATTAGTGCAAAGTACAAATCCAAAGTATATACACTTTAGAAAATTTCTGCTGAAGAACT 180
Db 121 ATTAGTGCAAAGTACAAATCCAAAGTATATACACTTTAGAAAATTTCTGCTGAAGAACT 180

Qy 181 CCTATTATAGAAAATTTCTCACTAAAAAGTTTTCGACATAAAGAGATGGTGAT 240
Db 181 CCTATTATAGAAAATTTCTCACTAAAAAGTTTTCGACATAAAGAGATGGTGAT 240

Qy 241 ATACAAAAAAGACGATTTTACAGAGTAGCTCCAGGATTTGATTTTCAAAAATTAACCTTA 300
Db 241 ATACAAAAAAGACGATTTTACAGAGTAGCTCCAGGATTTGATTTTCAAAAATTAACCTTA 300

Qy 301 ATATCAGGATTTTTCAGGAAGTATTTGTTTACTCTATGAGACGACCAAGATAGAACTTGA 360
Db 301 ATATCAGGATTTTTCAGGAAGTATTTGTTTACTCTATGAGACGACCAAGATAGAACTTGA 360

Qy 361 GCTGCATATCAACAAATTTAATCCAAAAACACCGATACCAATGATGATAATGGTGAA 420
Db 361 GCTGCATATCAACAAATTTAATCCAAAAACACCGATACCAATGATGATAATGGTGAA 420

Qy 421 TACTATAAACATTTTGCATTAATTTATGCTGATGTTAATCTTGTATGATGATGATGATG 480
Db 421 TACTATAAACATTTTGCATTAATTTATGCTGATGTTAATCTTGTATGATGATGATGATG 480

Qy 481 ATCAACACAGAGTCTCTGCAATTTATGCTGATGATGATGATGATGATGATGATGATG 540
Db 481 ATCAACACAGAGTCTCTGCAATTTATGCTGATGATGATGATGATGATGATGATGATG 540

Qy 541 GCTGAAGAGTATCTTTGATGATGATGATGATGATGATGATGATGATGATGATGATG 540
Db 541 GCTGAAGAGTATCTTTGATGATGATGATGATGATGATGATGATGATGATGATGATG 540

Qy 601 ATTTTAAAGACCTCAATCTAAATTTGCTTACCAAGGAAATAGGTATGATGATGATG 540
Db 601 ATTTTAAAGACCTCAATCTAAATTTGCTTACCAAGGAAATAGGTATGATGATGATGATG 540

Qy 661 ATCAACACAGAGTCTCTGCAATTTATGCTGATGATGATGATGATGATGATGATGATG 540
Db 661 ATCAACACAGAGTCTCTGCAATTTATGCTGATGATGATGATGATGATGATGATGATG 540

Qy 721 TTTGAGAGATACCTGTAAATTAACCTCTGTAGTATTAATGATGCTCTCAACACCATCT 540
Db 721 TTTGAGAGATACCTGTAAATTAACCTCTGTAGTATTAATGATGCTCTCAACACCATCT 540

Qy	541	GCTGAAGGAGTATCTTTTCGTACCATATGCAATGTCAGGTATAGGAGCAGATCTTTATCACT	600
Db	541	GCTGAAGGAGTATCTTTTCGTACCATATGCAATGTCAGGTATAGGAGCAGATCTTTATCACT	600
Qy	601	ATTTTTAAAGACCTCAATCTCAAAATTTGCTTACCAAGGAAATAATAGGTATTAGTTTACCCCT	660
Db	601	ATTTTTAAAGACCTCAATCTCAAAATTTGCTTACCAAGGAAATAATAGGTATTAGTTTACCCCT	660
Qy	661	ATCACACGAGAAGTCTCTGCAATTTATGCTGGATACTACCATGGCGTTATTGGTAAATAAA	720
Db	661	ATCACACGAGAAGTCTCTGCAATTTATGCTGGATACTACCATGGCGTTATTGGTAAATAAA	720
Qy	721	TTTCGAGAGATACCTGTAATAACTCCTGTAGTATTAAATGATGCTCCTCAAAACCACTCT	780
Db	721	TTTGAAGAGATACCTGTAATAACTCCTGTAGTATTAAATGATGCTCCTCAAAACCACTCT	780
Qy	781	GCTTCAGTAACCTTTGACGTTGGATACTTTGCGGAGAAATTTGGAATGAGGTTCACTTC	840
Db	781	GCTTCAGTAACCTTTGACGTTGGATACTTTGCGGAGAAATTTGGAATGAGGTTCACTTC	840

RESULT 5

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US-10-680-349-41
; Sequence 41, Application US/10680349
; Publication NO. US20040198951A1
; GENERAL INFORMATION:
; APPLICANT: Walker, David H.
; APPLICANT: McBride, Jere W.
; APPLICANT: Yu, Xue-Jie
; TITLE OF INVENTION: Homologous 28-Kilodalton Immunodominant Protein
; TITLE OF INVENTION: Genes of Ehrlichia canis and Uses Thereof
; FILE REFERENCE: D6152CIP2/D1
; CURRENT APPLICATION NUMBER: US/10/680,349
; CURRENT FILING DATE: 2003-10-07
; PRIOR APPLICATION NUMBER: US/10/062,624
; PRIOR FILING DATE: 2002-01-31
; PRIOR APPLICATION NUMBER: 09/660,587
; PRIOR FILING DATE: 2000-09-12
; NUMBER OF SEQ ID NOS: 46
; SEQ ID NO 41
; LENGTH: 840
; TYPE: DNA
; ORGANISM: Ehrlichia canis
; FEATURE:
; OTHER INFORMATION: nucleic acid sequence of E. canis p28-2
US-10-680-349-41

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Query Match	100.0%	Score 840;	DB 19;	Length 840;
Best Local Similarity	100.0%;	Pred. No. 8e-172;		
Matches 840;	Conservative 0;	Mismatches 0;	Indels 0;	Gaps 0;
Qy	1	ATGAATATATAGAAAATTCCTAGTAGAGCGCGTTAATCTCATTAATGTCTCAATCTTACCA	60	
Db	1	ATGAATATATAGAAAATTCCTAGTAGAGCGCGTTAATCTCATTAATGTCTCAATCTTACCA	60	
Qy	61	TATCAGTCTTTTGGCAGATCCTGTAGTTTCAAGAAGCTAATGATATACAAGAAGGCTTCTTAC	120	
Db	61	TATCAGTCTTTTGGCAGATCCTGTAGTTTCAAGAAGCTAATGATATACAAGAAGGCTTCTTAC	120	
Qy	121	ATTAGTGCAAAAGTACAATCCAAAGTATATCACACTTTAGAAAATTTCTCTGCTGAAGAACT	180	
Db	121	ATTAGTGCAAAAGTACAATCCAAAGTATATCACACTTTAGAAAATTTCTCTGCTGAAGAACT	180	
Qy	181	CCTATTAAATGGAAACAAATTCCTCACAATAAAAAAGTTTTTCGGACCTAAAGAAAGATGGTGAT	240	
Db	181	CCTATTAAATGGAAACAAATTCCTCACAATAAAAAAGTTTTTCGGACCTAAAGAAAGATGGTGAT	240	
Qy	241	ATAACAAAAAAGACGATTTTACAGAGTAGCTCCAGGCATTTGATTTTCAAAATAACTTTA	300	
Db	241	ATAACAAAAAAGACGATTTTACAGAGTAGCTCCAGGCATTTGATTTTCAAAATAACTTTA	300	
Qy	301	ATATCAGGATTTTTCAGGAAGTATTGGTTACTCTATGGACGGACCAAGAAATAGAACTTGA	360	

Db	301	ATATCAGGATTTTTCAGGAAGTATTGGTTACTCTATGGACGGACCAAGAATAGAACTTGAA	360
Qy	361	GCTGCATATCAACAATTTAATCCAAAAAACACCGGATAACAATGATACTGATAAATCGTGAA	420
Db	361	GCTGCATATCAACAATTTAATCCAAAAAACACCGGATAACAATGATACTGATAAATCGTGAA	420
Qy	421	TACTATAAAACATTTTGTGATTAATCTCGTAAAGATGCAATGGAAGATCAGCAATATGTAGTA	480
Db	421	TACTATAAAACATTTTGTGATTAATCTCGTAAAGATGCAATGGAAGATCAGCAATATGTAGTA	480
Qy	481	CTTAAAAAATGACGGCATAACTTTTATGTCAATGTGTTAATACTTGTCTATGACATTTACA	540
Db	481	CTTAAAAAATGACGGCATAACTTTTATGTCAATGTGTTAATACTTGTCTATGACATTTACA	540
Qy	541	GCTGAAGGAGTATCTTTTCGTACCATATGTCATGTGCAGGTATAGGAGCAGATCTTATCACT	600
Db	541	GCTGAAGGAGTATCTTTTCGTACCATATGTCATGTGCAGGTATAGGAGCAGATCTTATCACT	600
Qy	601	ATTTTTAAAGACCTCAATCTAAATTTTGCCTTACCAAGAAAAATAGGTATTAGTTACCCCT	660
Db	601	ATTTTTAAAGACCTCAATCTAAATTTTGCCTTACCAAGAAAAATAGGTATTAGTTACCCCT	660
Qy	661	ATCACACGAGAAGTCTCTGCATTTTATGGTGGATACTACCATGGCGTTATTGGTAAATAAA	720
Db	661	ATCACACGAGAAGTCTCTGCATTTTATGGTGGATACTACCATGGCGTTATTGGTAAATAAA	720
Qy	721	TTTGAGAGAGATACCTGTAATAACTCCCTGTAGTATTAAATGATGTCCTCAAAACCACTCT	780
Db	721	TTTGAGAGAGATACCTGTAATAACTCCCTGTAGTATTAAATGATGTCCTCAAAACCACTCT	780
Qy	781	GCTTCAGTAACCTTTGACGTTGGATACTTTGGCGGAGAAATTTGGAATGAGGTTCACTTC	840
Db	781	GCTTCAGTAACCTTTGACGTTGGATACTTTGGCGGAGAAATTTGGAATGAGGTTCACTTC	840

RESULT 6

US-10-731-554-41

; Sequence 41, Application US/10731554

; Publication No. US20040247616A1

; GENERAL INFORMATION:

; APPLICANT: Walker, David H.

; APPLICANT: McBride, Jere W.

; APPLICANT: Yu Xue-Jie

; TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein

; FILE REFERENCE: D6152CIP2

; CURRENT FILING DATE: 2003-12-09

; PRIOR FILING DATE: 2001-03-16

; PRIOR FILING DATE: 2000-09-12

; NUMBER OF SEQ ID NOS: 46

; SEQ ID NO 41

; LENGTH: 840

; TYPE: DNA

; ORGANISM: Ehrlichia canis

; FEATURE:

; OTHER INFORMATION: nucleic acid sequence of E. canis p28-2

US-10-731-554-41

RESULT 6

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US-10-731-554-41
; Sequence 41, Application US/10731554
; Publication NO. US20040247616A1
; GENERAL INFORMATION:
; APPLICANT: Walker, David H.
; APPLICANT: McBride, Jere W.
; APPLICANT: Yu, Xue-Jie
; TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein
; TITLE OF INVENTION: Genes of Ehrlichia canis and Uses Thereof
; FILE REFERENCE: D6152CIP2
; CURRENT APPLICATION NUMBER: US/10/731,554
; CURRENT FILING DATE: 2003-12-09
; PRIOR APPLICATION NUMBER: US/09/811,007
; PRIOR FILING DATE: 2001-03-16
; PRIOR APPLICATION NUMBER: 09/660,587
; PRIOR FILING DATE: 2000-09-12
; NUMBER OF SEQ ID NOS: 46
; SEQ ID NO 41
; LENGTH: 840
; TYPE: DNA
; ORGANISM: Ehrlichia canis
; FEATURE:
; OTHER INFORMATION: nucleic acid sequence of E. canis p28-2
US-10-731-554-41

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	Query Match	100.0%;	Score 840;	DB 20;	Length 840;
	Best Local Similarity	100.0%;	Pred. No. 8e-172;		
	Matches 840;	Conservative 0;	Mismatches 0;	Indels 0;	Gaps 0;
Qy	1	ATGAATTATAAGAAAAAATTCCTAGTAAGAAGCGCGTTAAATCTCATTTAAATGTCATCTTACCA	60		
Dd	1	ATGAATTATAAGAAAAAATTCCTAGTAAGAAGCGCGTTAAATCTCATTTAAATGTCATCTTACCA	60		
Qy	61	TATCAGTCTTTTGAGACTCCTGTAGGTTTCAAGAACTAATGATACAAAGAGGGCTTCTTAC	120		
Dd	61	TATCAGTCTTTTGAGACTCCTGTAGGTTTCAAGAACTAATGATACAAAGAGGGCTTCTTAC	120		

US-10-059-964--47									
Query Match		100.0%; Score 840; DB 13; Length 843;							
Best Local Similarity		100.0%; Pred. No. 8 1e-172;							
Matches 840; Conservative 0;		Mismatches 0; Indels 0; Gaps 0;							
Qy	1	ATGAATATTAAGAAAAATCTTAGTAAGAAGCGCGTTAATCTCATTTAAATGTCTCAATCTTACCA	60						
Db	1	ATGAATATTAAGAAAAATCTTAGTAAGAAGCGCGTTAATCTCATTTAAATGTCTCAATCTTACCA	60						
Qy	61	TATCAGTCTTTTGCAGATCCTGTAGGTTCACAGACTAATGATATACAAGAGAGCTTCTAC	120						
Db	61	TATCAGTCTTTTGCAGATCCTGTAGGTTCACAGACTAATGATATACAAGAGAGCTTCTAC	120						
Qy	121	ATTAGTGCAAGTACAAATCCAAGTATATCACCTTTAGAAAAATTTCTCTGCTGAAGAAACT	180						
Db	121	ATTAGTGCAAGTACAAATCCAAGTATATCACCTTTAGAAAAATTTCTCTGCTGAAGAAACT	180						
Qy	181	CCTATTAAATGGACAAATTTCTCTCACTTAAAAAGTTTTTCGGACTAAAGAAAGATGGTGAT	240						
Db	181	CCTATTAAATGGACAAATTTCTCTCACTTAAAAAGTTTTTCGGACTAAAGAAAGATGGTGAT	240						
Qy	241	ATAACAAAAAAGACGATTTTACAAGAGTAGTCTCAGGCAATTGATTTTCAAAATAAATCTTA	300						
Db	241	ATAACAAAAAAGACGATTTTACAAGAGTAGTCTCAGGCAATTGATTTTCAAAATAAATCTTA	300						
Qy	301	ATATCAGGATTTTACGGAAGTATTTGGTTACTCTATGACGCGACCAAGATAGAACTTTGAA	360						
Db	301	ATATCAGGATTTTACGGAAGTATTTGGTTACTCTATGACGCGACCAAGATAGAACTTTGAA	360						
Qy	361	GCTGCATATCAACAAATTTAATCCAAAAAACCAGTAAACAATGATCTGATAATGGTGAA	420						
Db	361	GCTGCATATCAACAAATTTAATCCAAAAAACCAGTAAACAATGATCTGATAATGGTGAA	420						
Qy	421	TACTATAAACAATTTTGCATTTATCTCGTAAAGATGCAATGGAAGATCAGCAATATGTAGTA	480						
Db	421	TACTATAAACAATTTTGCATTTATCTCGTAAAGATGCAATGGAAGATCAGCAATATGTAGTA	480						
Qy	481	CTTAAAAATGACGGCATAACTTTTATGTCTAATGATGGTTAATACTTGCTATGACATTACA	540						
Db	481	CTTAAAAATGACGGCATAACTTTTATGTCTAATGATGGTTAATACTTGCTATGACATTACA	540						
Qy	541	GCTGAAGGAGTATCTTTTCGTACCATATGCGATGTCAGGTATAGGAGCAGATCTTATCACT	600						
Db	541	GCTGAAGGAGTATCTTTTCGTACCATATGCGATGTCAGGTATAGGAGCAGATCTTATCACT	600						
Qy	601	ATTTTTAAAGACCTCAATCTAAAAATTTGCTTTACCAAGGAAAAATAGGTATTTAGTTACCCCT	660						
Db	601	ATTTTTAAAGACCTCAATCTAAAAATTTGCTTTACCAAGGAAAAATAGGTATTTAGTTACCCCT	660						
Qy	661	ATCACACCAGAGTCTCTGCAATTTATTTGGTGGATACTACCATGGCGTTATTTGGTAATAAA	720						
Db	661	ATCACACCAGAGTCTCTGCAATTTATTTGGTGGATACTACCATGGCGTTATTTGGTAATAAA	720						
Qy	721	TTTGAGAAGATACCTGTAAATACTCTCTGTAGTATTTAAATGATGCTCTCTCAAAACCACATCT	780						
Db	721	TTTGAGAAGATACCTGTAAATACTCTCTGTAGTATTTAAATGATGCTCTCTCAAAACCACATCT	780						
Qy	781	GCTTTCAGTAACTCTTGACGTTGGATACCTTTGGCGGAGAAATTTGGAATGAGGTTCCACCTTC	840						
Db	781	GCTTTCAGTAACTCTTGACGTTGGATACCTTTGGCGGAGAAATTTGGAATGAGGTTCCACCTTC	840						

RESULT 8
US-10-314-639-47
... Section 47 Analysis US/10314639

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; Sequence 47, Application US/10314639
; Publication No. US20030103991A1
; GENERAL INFORMATION:
; APPLICANT: Rikihisa, Yasuko
; APPLICANT: Ohasi, No. US20030103991A1io
; TITLE OF INVENTION: Outer Membrane Protein of Ehrlichia Canis and Ehrlichia
; TITLE OF INVENTION: Chaifeensis
; FILE REFERENCE: 22727/04021

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RESULT 7
US-10-059-964-47
; Sequence 47, Application US/10059964
; Publication No. US20020120115A1
; GENERAL INFORMATION:
; APPLICANT: Rikihisa, Yasuko
; APPLICANT: Onasi, No. US20020120115A1lo
; TITLE OF INVENTION: Outer Membrane Protein of Ehrlichia Canis and Ehrlichia
; TITLE OF INVENTION: Chaffeensis
; FILE REFERENCE: 22727/04021
; CURRENT APPLICATION NUMBER: US/10/059,964
; CURRENT FILING DATE: 2002-01-28
; EARLIER APPLICATION NUMBER: 09/314,701
; EARLIER FILING DATE: 1999-05-19
; NUMBER OF SEQ ID NOS: 66
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 47
; LENGTH: 843
; TYPE: DNA
; ORGANISM: Ehrlichia canis
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (1)..(843)

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;
; CURRENT APPLICATION NUMBER: US/10/314,639
; CURRENT FILING DATE: 2002-12-09
; PRIOR APPLICATION NUMBER: US/09/314,701
; PRIOR FILING DATE: 1999-05-19
; NUMBER OF SEQ ID NOS: 66
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 47
; LENGTH: 843
; TYPE: DNA
; ORGANISM: Ehrlichia canis
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (1)...(843)
US-10-314-639-47

Query Match 100.0%; Score 840; DB 15; Length 843;
Best Local Similarity 100.0%; Pred. No. 8.1e-172;
Matches 840; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 ATGAATTATAGAAATCTAGTAAGAGCGGTTAATCTCATTAATGTCAATCTTACCA 60
Db |||||
Qy 1 ATGAATTATAGAAATCTAGTAAGAGCGGTTAATCTCATTAATGTCAATCTTACCA 60
Db |||||
Qy 61 TATCAGTCTTTTGCAGATCCTGTAGGTTCAAGAACTAATGATAACAAGAGGCTTCTAC 120
Db |||||
Qy 61 TATCAGTCTTTTGCAGATCCTGTAGGTTCAAGAACTAATGATAACAAGAGGCTTCTAC 120
Db |||||
Qy 121 ATTAGTGCAGAACTCAATCAAGTATATACACTTTAGAAAAATCTCTGCTGAAGAACT 180
Db |||||
Qy 121 ATTAGTGCAGAACTCAATCAAGTATATACACTTTAGAAAAATCTCTGCTGAAGAACT 180
Db |||||
Qy 181 CCTATTAAATGGAACAAATCTCTCACTAAAGAGTTTTCGGACTAAAGAAAGATGGTAT 240
Db |||||
Qy 181 CCTATTAAATGGAACAAATCTCTCACTAAAGAGTTTTCGGACTAAAGAAAGATGGTAT 240
Db |||||
Qy 241 ATACAAAAAAGACGATTTTACAAGAGTAGCTCCAGGCAATGATTTTCAAAAATAACTTA 300
Db |||||
Qy 241 ATACAAAAAAGACGATTTTACAAGAGTAGCTCCAGGCAATGATTTTCAAAAATAACTTA 300
Db |||||
Qy 301 ATATCAGAGTTTTCAGGAAGTATTTGTTACTCTATGGAACGCAACAAGATAGGTA 360
Db |||||
Qy 301 ATATCAGAGTTTTCAGGAAGTATTTGTTACTCTATGGAACGCAACAAGATAGGTA 360
Db |||||
Qy 361 GCTGCATATCAACAAATTTAATCCAAAAACACCGATACATGATCTGATATGGTAA 420
Db |||||
Qy 361 GCTGCATATCAACAAATTTAATCCAAAAACACCGATACATGATCTGATATGGTAA 420
Db |||||
Qy 421 TACTATAAACAATTTTGCATTTATCGTAAAGATGCAATGGAAGATCAGCAATATGTAGTA 480
Db |||||
Qy 421 TACTATAAACAATTTTGCATTTATCGTAAAGATGCAATGGAAGATCAGCAATATGTAGTA 480
Db |||||
Qy 481 CTTAAAAATGACGGCAATACTTTTATGCTATGATGGTTAATCTTGTATGACATTACA 540
Db |||||
Qy 481 CTTAAAAATGACGGCAATACTTTTATGCTATGATGGTTAATCTTGTATGACATTACA 540
Db |||||
Qy 541 GCTGAAGAGTATCTTTGCGTACCATATGCGATGCGAGTATAGGAGAGATCTTATCACT 600
Db |||||
Qy 541 GCTGAAGAGTATCTTTGCGTACCATATGCGATGCGAGTATAGGAGAGATCTTATCACT 600
Db |||||
Qy 601 ATTTTAAAGACCTCAATCTAAAAATTTGCTTTACCAAGGAAAAATAGGTTATAGTTACCCCT 660
Db |||||
Qy 601 ATTTTAAAGACCTCAATCTAAAAATTTGCTTTACCAAGGAAAAATAGGTTATAGTTACCCCT 660
Db |||||
Qy 661 ATCACACAGAGTCTCTGCAATTTATTTGGTGGATACCTACCATGGCGTTATGGTAATAA 720
Db |||||
Qy 661 ATCACACAGAGTCTCTGCAATTTATTTGGTGGATACCTACCATGGCGTTATGGTAATAA 720
Db |||||
Qy 721 TTTGAGAGATACCTGTAAATCTCTGTTAGTATTTAAATGATGCTCCCTCAAAACACATCT 780
Db |||||
Qy 721 TTTGAGAGATACCTGTAAATCTCTGTTAGTATTTAAATGATGCTCCCTCAAAACACATCT 780
Db |||||
Qy 781 GCTTCAGTAACTCTGTGAGTCTTTGGGAGAGAAATGGAATGAGGTTCACTTC 840
Db |||||

Db 781 GCTTCAGTAACTCTTGACGTTGGATATCTTTGGCGGAGAAATTTGAATGAGTTCACTTC 840

RESULT 9
US-10-901-714-47
; Sequence 47, Application US/10901714
; Publication No. US20040265333A1
; GENERAL INFORMATION:
; APPLICANT: RIKIHISA, YASUKO
; APPLICANT: OHASHI, NORIO
; TITLE OF INVENTION: OUTER MEMBRANE PROTEIN OF EHRlichia CANIS AND EHRlichia
; TITLE OF INVENTION: CHAFFEENSIS
; FILE REFERENCE: 22727-04109
; CURRENT APPLICATION NUMBER: US/10/901,714
; CURRENT FILING DATE: 2004-07-29
; PRIOR APPLICATION NUMBER: 09/314,701
; PRIOR FILING DATE: 1999-05-19
; PRIOR APPLICATION NUMBER: 60/100,843
; PRIOR FILING DATE: 1998-09-18
; NUMBER OF SEQ ID NOS: 69
; SOFTWARE: PatentIn Ver. 3.2
; SEQ ID NO 47
; LENGTH: 843
; TYPE: DNA
; ORGANISM: Ehrlichia canis
US-10-901-714-47

Query Match 100.0%; Score 840; DB 20; Length 843;
Best Local Similarity 100.0%; Pred. No. 8.1e-172;
Matches 840; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 ATGAATTATAGAAATCTAGTAAGAGCGGTTAATCTCATTAATGTCAATCTTACCA 60
Db |||||
Qy 1 ATGAATTATAGAAATCTAGTAAGAGCGGTTAATCTCATTAATGTCAATCTTACCA 60
Db |||||
Qy 61 TATCAGTCTTTTGCAGATCCTGTAGGTTCAAGAACTAATGATAACAAGAGGCTTCTAC 120
Db |||||
Qy 61 TATCAGTCTTTTGCAGATCCTGTAGGTTCAAGAACTAATGATAACAAGAGGCTTCTAC 120
Db |||||
Qy 121 ATTAGTGCAGAACTCAATCAAGTATATACACTTTAGAAAAATCTCTGCTGAAGAACT 180
Db |||||
Qy 121 ATTAGTGCAGAACTCAATCAAGTATATACACTTTAGAAAAATCTCTGCTGAAGAACT 180
Db |||||
Qy 181 CCTATTAAATGGAACAAATCTCTCACTAAAGAGTTTTCGGACTAAAGAAAGATGGTAT 240
Db |||||
Qy 181 CCTATTAAATGGAACAAATCTCTCACTAAAGAGTTTTCGGACTAAAGAAAGATGGTAT 240
Db |||||
Qy 241 ATACAAAAAAGACGATTTTACAAGAGTAGCTCCAGGCAATGATTTTCAAAAATAACTTA 300
Db |||||
Qy 241 ATACAAAAAAGACGATTTTACAAGAGTAGCTCCAGGCAATGATTTTCAAAAATAACTTA 300
Db |||||
Qy 301 ATATCAGAGTTTTCAGGAAGTATTTGTTACTCTATGGAACGCAACAAGATAGGTA 360
Db |||||
Qy 301 ATATCAGAGTTTTCAGGAAGTATTTGTTACTCTATGGAACGCAACAAGATAGGTA 360
Db |||||
Qy 361 GCTGCATATCAACAAATTTAATCCAAAAACACCGATACATGATCTGATATGGTAA 420
Db |||||
Qy 361 GCTGCATATCAACAAATTTAATCCAAAAACACCGATACATGATCTGATATGGTAA 420
Db |||||
Qy 421 TACTATAAACAATTTTGCATTTATCGTAAAGATGCAATGGAAGATCAGCAATATGTAGTA 480
Db |||||
Qy 421 TACTATAAACAATTTTGCATTTATCGTAAAGATGCAATGGAAGATCAGCAATATGTAGTA 480
Db |||||
Qy 481 CTTAAAAATGACGGCAATACTTTTATGCTATGATGGTTAATCTTGTATGACATTACA 540
Db |||||
Qy 481 CTTAAAAATGACGGCAATACTTTTATGCTATGATGGTTAATCTTGTATGACATTACA 540
Db |||||
Qy 541 GCTGAAGAGTATCTTTGCGTACCATATGCGATGCGAGTATAGGAGAGATCTTATCACT 600
Db |||||
Qy 541 GCTGAAGAGTATCTTTGCGTACCATATGCGATGCGAGTATAGGAGAGATCTTATCACT 600
Db |||||
Qy 601 ATTTTAAAGACCTCAATCTAAAAATTTGCTTTACCAAGGAAAAATAGGTTATAGTTACCCCT 660
Db |||||

Db 601 ATTTTAAAGACCTCAATCTAAATTTGCTTACCAGGAAAAATAGGTATTAGTTACCCCT 660
Qy 661 ATCACACAGAGTCTCTGCAATTTATTTGGTGATACCTACCATGGCGTTATTGGTAATAAA 720
Db 661 ATCACACAGAGTCTCTGCAATTTATTTGGTGATACCTACCATGGCGTTATTGGTAATAAA 720
Qy 721 TTTGAGAGATACCTGTAATAACTCTCTAGTATTAAATGATGCTCTCAAAACACATCT 780
Db 721 TTTGAGAGATACCTGTAATAACTCTCTAGTATTAAATGATGCTCTCAAAACACATCT 780
Qy 781 GCTTCAGTAACCTCTTGACGTTGGATACCTTGGCGGAGAAAAATTGGAATGAGGTTACACCTTC 840
Db 781 GCTTCAGTAACCTCTTGACGTTGGATACCTTGGCGGAGAAAAATTGGAATGAGGTTACACCTTC 840

RESULT 10
US-10-901-774-47
; Sequence 47, Application US/10901774
; Publication No. US20040265334A1
; GENERAL INFORMATION:
; APPLICANT: RIKIHISA, YASUKO
; APPLICANT: OHASHI, NORIO
; TITLE OF INVENTION: OUTER MEMBRANE PROTEIN OF EHRlichia CANIS AND EHRlichia
; FILE REFERENCE: 22727-04109
; CURRENT APPLICATION NUMBER: US/10/901,774
; CURRENT FILING DATE: 2004-07-29
; PRIOR APPLICATION NUMBER: 09/314,701
; PRIOR FILING DATE: 1999-05-19
; PRIOR APPLICATION NUMBER: 60/100,843
; PRIOR FILING DATE: 1998-09-18
; NUMBER OF SEQ ID NOS: 69
; SOFTWARE: PatentIn Ver. 3.2
; SEQ ID NO 47
; LENGTH: 843
; TYPE: DNA
; ORGANISM: Ehrlichia canis
US-10-901-774-47

Query Match 100.0%; Score 840; DB 20; Length 843;
Best Local Similarity 100.0%; Pred. No. 8.1e-172;
Matches 840; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 ATGAATTAAGAAAAATCTCTAGTAAGAGCGCGTTAATCTCATTAATGTCAATCTTACCA 60
Db 1 ATGAATTAAGAAAAATCTCTAGTAAGAGCGCGTTAATCTCATTAATGTCAATCTTACCA 60
Qy 61 TATCAGTCTTTTGCAGATCCTGTAGGTTCAAGAACTAATGATAACAAGAGCGTTCTAC 120
Db 61 TATCAGTCTTTTGCAGATCCTGTAGGTTCAAGAACTAATGATAACAAGAGCGTTCTAC 120
Qy 121 ATTAGTCAAAAGTCAAACTCCAAAGTATATCACACTTTAGAAAAATCTCTGCTGAAGAACT 180
Db 121 ATTAGTCAAAAGTCAAACTCCAAAGTATATCACACTTTAGAAAAATCTCTGCTGAAGAACT 180
Qy 181 CCTATTAAATGAACAAATCTCTCACTAAAAAAGTTTTTCGGACTAAAGAAAGATGGTGA 240
Db 181 CCTATTAAATGAACAAATCTCTCACTAAAAAAGTTTTTCGGACTAAAGAAAGATGGTGA 240
Qy 241 ATACAAAAAAGACGATTTTACAGAGTAGCTCCAGGCATTTGATTTCAAAATAACTTA 300
Db 241 ATACAAAAAAGACGATTTTACAGAGTAGCTCCAGGCATTTGATTTTCAAAATAACTTA 300
Qy 301 ATATCAGGATTTTACAGGAGTATTGTTTACTCTATGAGCGACCAAGAAATAGAACTTGAA 360
Db 301 ATATCAGGATTTTACAGGAGTATTGTTTACTCTATGAGCGACCAAGAAATAGAACTTGAA 360
Qy 361 GCTGCATATCACAATTTAAATCCAAAAAACCCGATACAAATGATGATAATGGTGA 420
Db 361 GCTGCATATCACAATTTAAATCCAAAAAACCCGATACAAATGATGATAATGGTGA 420
Qy 421 TACTATAACATTTTGCATTTATCTGTAAGATGCAATGGAAGATCAGCAATATGTAGTA 480

Db 421 TACTATAAAACATTTTGTGCATTTATCTCGTAAAGATGCAATGGAAGATCAGCAATATGTAGTA 480
Qy 481 CTTAAAAATGACGCATAACTTTTATGCTCATTTGATGCTTAATCTTGTATGACATTACA 540
Db 481 CTTAAAAATGACGCATAACTTTTATGCTCATTTGATGCTTAATCTTGTATGACATTACA 540
Qy 541 GCTGAAGAGATATCTTTTCGTACCATATGCTATGCTGAGGTATAGGAGAGATCTTATCACT 600
Db 541 GCTGAAGAGATATCTTTTCGTACCATATGCTATGCTGAGGTATAGGAGAGATCTTATCACT 600
Qy 601 ATTTTAAAGACCTCAATCTAAATTTGCTTACCAAGGAAAAATAGGTATTAGTTACCCCT 660
Db 601 ATTTTAAAGACCTCAATCTAAATTTGCTTACCAAGGAAAAATAGGTATTAGTTACCCCT 660
Qy 661 ATCACACAGAGTCTCTGCAATTTATTTGGTGATACCTACCATGGCGTTATTGGTAATAAA 720
Db 661 ATCACACAGAGTCTCTGCAATTTATTTGGTGATACCTACCATGGCGTTATTGGTAATAAA 720
Qy 721 TTTGAGAGATACCTGTAATAACTCTCTGATGATTAATGATGCTCTCAAAACACATCT 780
Db 721 TTTGAGAGATACCTGTAATAACTCTCTGATGATTAATGATGCTCTCAAAACACATCT 780
Qy 781 GCTTCAGTAACCTCTTGACGTTGGATACCTTGGCGGAGAAAAATTGGAATGAGGTTACACCTTC 840
Db 781 GCTTCAGTAACCTCTTGACGTTGGATACCTTGGCGGAGAAAAATTGGAATGAGGTTACACCTTC 840

RESULT 11
US-10-059-964-3
; Sequence 3, Application US/10059964
; Publication No. US20020120115A1
; GENERAL INFORMATION:
; APPLICANT: RIKIHISA, YASUKO
; APPLICANT: OHASHI, No. US20020120115A1io
; TITLE OF INVENTION: Outer Membrane Protein of Ehrlichia Canis and Ehrlichia
; TITLE OF INVENTION: Chaffeensis
; FILE REFERENCE: 22727/04021
; CURRENT APPLICATION NUMBER: US/10/059,964
; CURRENT FILING DATE: 2002-01-28
; EARLIER APPLICATION NUMBER: 09/314,701
; EARLIER FILING DATE: 1999-05-19
; NUMBER OF SEQ ID NOS: 66
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 3
; LENGTH: 852
; TYPE: DNA
; ORGANISM: Ehrlichia chaffeensis
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (1)..(852)
US-10-059-964-3

Query Match 71.3%; Score 598.6; DB 13; Length 852;
Best Local Similarity 82.6%; Pred. No. 1.4e-119;
Matches 701; Conservative 0; Mismatches 139; Indels 9; Gaps 1;

Qy 1 ATGAATTAAGAAAAATTTCTAGTAAGAGCGCGTTAATCTCATTAATGTCAATCTTACCA 60
Db 1 ATGAATTAAGAAAAATTTTGTAGCGGTGCAATTAATTTCAATTTCAATCTTACCT 60
Qy 61 TATCAGTCTTTTGCAGATCCTGTAGGTTCAA-----GAACATAATGATAACAAAGAA 111
Db 61 TACCAATCTTTTGCAGATCCTGTAACTTCAAAATGATACAGAAATCAACGACGACAGAA 120
Qy 112 GGCTTCTACATTAAGTCAAAAGTCAATCCAAAGTATATCACACTTTAGAAAAATCTCTGCT 171
Db 121 GGCTTCTACATTAAGTCAAAAGTCAATCCAAAGTATATCACACTTTAGAAAAATCTCTGCT 180
Qy 172 GAAGAAACTCTTATTAATGGAACAAATTTCTCTCACTAAAAAAGTTTTTCGGACTAAAGAA 231
Db 181 GAAGAACTCCCATCAATGGAATATCTTCACTAAAAAAGTTTTTCGGGCTGAAAAA 240
Qy 232 GATGGTATATAACAAAAAAGACGATTTTACAAGAGTAGCTCCAGGCAATGATTTTCAA 291

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RESULT 12
US-10-314-639-3
; Sequence 3, Application US/10314639
; Publication No. US20030103991A1
; GENERAL INFORMATION:
; APPLICANT: Rikihisa, Yasuko
; APPLICANT: Ohasi, No. US20030103991A1io
; TITLE OF INVENTION: Outer Membrane Protein of Ehrlichia Canis and Ehrlichia
; FILE REFERENCE: 22727/04021
; CURRENT APPLICATION NUMBER: US/10/314,639
; CURRENT FILING DATE: 2002-12-09
; PRIOR APPLICATION NUMBER: US/09/314,701
; PRIOR FILING DATE: 1999-05-19
; NUMBER OF SEQ ID NOS: 66
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 3
; LENGTH: 852
; TYPE: DNA
; ORGANISM: Ehrlichia chaffeensis
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (1)..(852)
US-10-104-639-3

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RESULT 13
US-10-901-714-3
; Sequence 3, Application US/10901714
; Publication No. US2004026533A1
; GENERAL INFORMATION:
; APPLICANT: RIKITHISA, YASUKO
; APPLICANT: OHASHI, NORIO
; TITLE OF INVENTION: OUTER MEMBRANE PROTEIN OF EHRLICHIA CANIS AND EHRLICHIA
; TITLE OF INVENTION: CHAFFENSIS
; FILE REFERENCE: 22727-04109
; CURRENT APPLICATION NUMBER: US/10/901.714
; CURRENT FILING DATE: 2004-07-29

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; TITLE OF INVENTION: CHAFFEENSIS
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; FILE REFERENCE: 22727-04109
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; CURRENT APPLICATION NUMBER: US/10/901,714
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; CURRENT FILING DATE: 2004-07-29
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Db      841  TTCACCTTC 849
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RESULT 14
US-10-901-774-3
; Sequence 3, Application US/10901774
; Publication No. US20040265334A1
; GENERAL INFORMATION:
; APPLICANT: RIKIHISA, YASUKO
; APPLICANT: OHASHI, NORIO
; TITLE OF INVENTION: OUTER MEMBRANE PROTEIN OF EHRLICHIA CANIS AND EHRLICHIA
; TITLE OF INVENTION: CHAFFEENSIS
; FILE REFERENCE: 22727-04109
; CURRENT APPLICATION NUMBER: US/10/901,774
; PRIORITY FILING DATE: 2004-07-29
; PRIOR APPLICATION NUMBER: 09/314,701
; PRIOR FILING DATE: 1999-05-19
; PRIOR APPLICATION NUMBER: 60/100,843
; PRIOR FILING DATE: 1998-09-18
; NUMBER OF SEQ ID NOS: 69
; SOFTWARE: PatentIn Ver. 3.2
; SEQ ID NO 3
; LENGTH: 852
; TYPE: DNA
; ORGANISM: Ehrlichia chaffeensis
US-10-901-774-3

Query Match      71.3%; Score 598.6; DB 20; Length 852;
Best Local Similarity 82.6%; Pred. No. 1.4e-119;
Matches 701; Conservative 0; Mismatches 139; Indels 9; Gaps 1

Qy      1  ATGAATTATATAAGAAAAATTTCTAGTAAGAAGCGCGTTAAATCTCATTAATGTCAAATCTTACCA 60
      |||||
Db      1  ATGAATTACAGAAAAATTTTGTGAAGCAGTGCATTAATTTTCATTAATGTCATCTTACT 60

Qy      61  TATCAGTCTTTTGCAGATCCTGTAGGTTCAA-----GAACCTAATGATAACAAGAA 111
      |||||
Db      61  TACCAATCTTTTGCAGATCCTGTAACTTCAAATGATACAGGAATCAACGACGACAGAA 120

Qy      112  GGCTTCTACATTAGTGAAGATCAATCCAAAGTATATACACACTTTAGAAAAATTCCTGCT 171
      |||||
Db      121  GGCTTCTACATTAGTGTAAAGTATAATCCAAAGCATATCACACTTCAGAAAAATTCCTCAGCT 180

Qy      172  GAAGAAACTCCTATTAAATGGAACAAATTCCTCTCACTAAAAAGTTTTCGGACTAAAGAA 231
      |||||
Db      181  GAAGAGCTCCCATCAATGGAAATACCTTCATCACTAAAAAGTTTTCGGGCTGAAAAA 240

Qy      232  GATGGTGATATAACAAAAAAGCAGATTTTAAAGAGTAGCTCCAGGCATTTGATTTTCAA 291
      |||||
Db      241  GACGGAGATATAGCACAATCTCGCAAATTTTAAACAGGACAGATCCAGCCCTCGAGTTTCAG 300

Qy      292  AATAACTTAATATACAGATTTTCAGGAAGATATTGGTTACTCTATGGACGGACCAAGAATA 351
      |||||
Db      301  AATAACCTAATATACAGATTTCTCAGGAAGTATTGGTTATGCTATGGATGGGCCAAGAATA 360

Qy      352  GAACCTCAAGCTGCATATCAACAATTTTAATCCAAAAAACCCGATAAACAATGATACTGAT 411
      |||||
Db      361  GAACCTGAAGCTGCATACCAAAAATTTGATGCAAAAAAATCCTGACACAAATGACNCTAAT 420

Qy      412  AATGGTGAATACATATAAACATTTTTCGATATATCTCGTAAAGATGCAATGGAAAGATCAGAA 471
      |||||
Db      421  AGCGGTGACTACTATAAATACTTTGGACTATCTCGTGAAGACGCAATAGCAGATAAGAA 480

Qy      472  TATGTAGTACTTAAAAATGACGGCATAACTTTTATATGTCATTTGATGTTAATACTTGCTAT 531
      |||||
Db      481  TATGTTCTCTTAAAAATGAAGGCATCACTTTTATATGTCATTTAATGGTTTAAACACTTGTCTAT 540

Qy      532  GACATTACAGCTGAAGGAGTATCTTTTCGTACCATATGTCATGTCAGGATATAGGAGCAGAT 591
      |||||
Db      541  GACATTACAGCTGAAGGAGTACCTTTTCATCCGTCATGTCATGTCAGGTTGATAGGAGCAGAC 600

Qy      592  CTTATCACTATTTTTTAAAGACCTCAATCTAAAAATTTGCTTACCAGGAAAAATATGGTATT 651
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OM nucleic - nucleic search, using sw model

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936.927 Million cell updates/sec

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Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 1202784 seqs, 818138359 residues

Total number of hits satisfying chosen parameters: 2405568

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Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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1	840	100.0	840	3	US-09-660-587-41
2	840	100.0	840	4	US-09-811-007A-41
3	840	100.0	843	4	US-09-314-701-47
4	598.6	71.3	852	4	US-09-314-701-3
5	243.4	29.0	849	3	US-09-648-520E-48
6	238.4	28.4	924	4	US-09-314-701-35
7	238.4	28.4	1607	3	US-09-660-587-1
8	238.4	28.4	1607	3	US-09-261-358A-1
9	238.4	28.4	1607	3	US-09-648-520E-47
10	238.4	28.4	1607	3	US-09-201-458-1
11	238.4	28.4	1607	4	US-09-811-007A-1
12	234	27.9	840	3	US-09-660-587-5
13	234	27.9	840	3	US-09-261-358A-5
14	234	27.9	840	4	US-09-811-007A-5
15	232.4	27.7	843	4	US-09-314-701-37
16	232.4	27.7	846	4	US-09-314-701-1
17	228.6	27.2	830	3	US-08-953-326-11
18	228.6	27.2	830	4	US-09-553-662-11
19	228.6	27.2	830	4	US-10-062-994-11
20	217.4	25.9	867	4	US-09-314-701-31
21	212.8	25.3	861	3	US-08-953-326-8
22	212.8	25.3	861	4	US-09-314-701-7
23	212.8	25.3	861	4	US-09-553-662-8
24	212.8	25.3	861	4	US-10-062-994-8
25	207.2	24.7	843	3	US-08-953-326-10
26	207.2	24.7	843	4	US-09-314-701-11
27	207.2	24.7	843	4	US-09-553-662-10

28	207.2	24.7	843	4	US-10-062-994-10	Sequence 10, Appl
29	205	24.4	837	3	US-08-953-326-9	Sequence 9, Appli
30	205	24.4	837	4	US-09-314-701-9	Sequence 9, Appli
31	205	24.4	837	4	US-09-553-662-9	Sequence 9, Appli
32	205	24.4	837	4	US-10-062-994-9	Sequence 9, Appli
33	203.8	24.3	842	3	US-08-733-230-3	Sequence 3, Appli
34	203.8	24.3	842	3	US-08-953-326-3	Sequence 3, Appli
35	203.8	24.3	842	4	US-09-553-662-3	Sequence 3, Appli
36	203.8	24.3	842	4	US-10-062-994-3	Sequence 3, Appli
37	198.4	23.6	843	4	US-09-314-701-5	Sequence 5, Appli
38	195	23.2	828	3	US-09-660-587-43	Sequence 43, Appl
39	195	23.2	828	4	US-09-811-007A-43	Sequence 43, Appl
40	195	23.2	864	3	US-08-733-230-1	Sequence 1, Appli
41	195	23.2	864	3	US-08-953-326-1	Sequence 1, Appli
42	195	23.2	864	4	US-09-553-662-1	Sequence 1, Appli
43	195	23.2	864	4	US-10-062-994-1	Sequence 1, Appli
44	191.8	22.8	831	4	US-09-314-701-41	Sequence 41, Appl
45	185.4	22.1	840	4	US-09-314-701-23	Sequence 23, Appl

ALIGNMENTS

RESULT 1

US-09-660-587-41
; Sequence 41, Application US/09660587
; Patent No. 6392023
; GENERAL INFORMATION:
; APPLICANT: Walker, David H.
; APPLICANT: McBride, Jere W.
; TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein
; FILE REFERENCE: D6152C1P2
; CURRENT APPLICATION NUMBER: US/09/660,587
; CURRENT FILING DATE: 2000-09-12
; PRIOR APPLICATION NUMBER: 09/261,358
; PRIOR FILING DATE: 1999-03-03
; NUMBER OF SEQ ID NOS: 46
; SEQ ID NO 41
; LENGTH: 840
; TYPE: DNA
; ORGANISM: Ehrlichia canis
; FEATURE:
; OTHER INFORMATION: nucleic acid sequence of E. canis p28-2
US-09-660-587-41

Query Match	100.0%;	Score 840;	DB 3;	Length 840;
Best Local Similarity	100.0%;	Pred. No. 1.1e-211;		
Matches	840;	Conservative	0;	Mismatches 0; Indels 0; Gaps 0;
Qy	1	ATGAATTATAGAAAAATTTCTAGTAAGAAGCGGTTAATCTCATTAAATGTCAATCTTACCA	60	
Db	1	ATGAATTATAGAAAAATTTCTAGTAAGAAGCGGTTAATCTCATTAAATGTCAATCTTACCA	60	
Qy	61	TATCAGTCTTTTCGAGATCCTGTAGGTTCAAGAACTAATGATACAAAGAAGGCTTCTAC	120	
Db	61	TATCAGTCTTTTCGAGATCCTGTAGGTTCAAGAACTAATGATACAAAGAAGGCTTCTAC	120	
Qy	121	ATTAGTCCAAGTACAAATCCCAAGTATATACACTTTAGAAAAATTTCTCTGCTGAAGAACT	180	
Db	121	ATTAGTCCAAGTACAAATCCCAAGTATATACACTTTAGAAAAATTTCTCTGCTGAAGAACT	180	
Qy	181	CCATTAAATCGAACAATTTCTCCTACATAAAGTTTTTCGAGCTTAAAGAAGATGGTAT	240	
Db	181	CCATTAAATCGAACAATTTCTCCTACATAAAGTTTTTCGAGCTTAAAGAAGATGGTAT	240	
Qy	241	ATAACAAAAAAGACGATTTTACAAGAGTAGCTCCAGGCAATGATTTTCAAAATAACTTA	300	
Db	241	ATAACAAAAAAGACGATTTTACAAGAGTAGCTCCAGGCAATGATTTTCAAAATAACTTA	300	
Qy	301	ATATCAGGATTTTCAGGAAGTATTTGTTACTCTATGACCGGACCAAGATAGAACTTGAA	360	

Db 301 ATATCAGGATTTTTCAGGAAGTATTGGTTACTCTATGCGGACCAAGATAGAACTTGAA 360
QY 361 GCTGCATATCAACAAATTTAATCCAAAAACACCGATAACAATGATATGATGTAATGTTGAA 420
Db 361 GCTGCATATCAACAAATTTAATCCAAAAACACCGATAACAATGATATGATGTAATGTTGAA 420
QY 421 TACTATAAAACATTTTGCATTTATCTCGTAAAGATGCAATGGAAGATCAGCAATATGTAGTA 480
Db 421 TACTATAAAACATTTTGCATTTATCTCGTAAAGATGCAATGGAAGATCAGCAATATGTAGTA 480
QY 481 CTTAAAAATGACGGCATAAATTTTATGTCATATGATGGTTAATATCTGCTATGACATTACA 540
Db 481 CTTAAAAATGACGGCATAAATTTTATGTCATATGATGGTTAATATCTGCTATGACATTACA 540
QY 541 GCTGGAAGGATGCTTTTCGTAACCATATGCGATGTCAGGATATAGGAGCAGATCTTATCACT 600
Db 541 GCTGGAAGGATGCTTTTCGTAACCATATGCGATGTCAGGATATAGGAGCAGATCTTATCACT 600
QY 601 ATTTTAAAGACCTCAATCTAAAATTTGCTTACCAAGGAAAAATAGGTATTAGTTACCCT 660
Db 601 ATTTTAAAGACCTCAATCTAAAATTTGCTTACCAAGGAAAAATAGGTATTAGTTACCCT 660
QY 661 ATCACACGAGAAGTCTCGCATTTATTTGGTGGATACCTACCATGGCGTTATTGGTAAATAA 720
Db 661 ATCACACGAGAAGTCTCGCATTTATTTGGTGGATACCTACCATGGCGTTATTGGTAAATAA 720
QY 721 TTTGAGAAGATACCTGTAAATCACTCTGTTAGTATTAAATGATGCTCTCAACCATCT 780
Db 721 TTTGAGAAGATACCTGTAAATCACTCTGTTAGTATTAAATGATGCTCTCTCAACCATCT 780
QY 781 GCTTCAGTAACCTCTTGACGTTGGATACCTTTGGCGGAGAAATGGAAATGAGTTTCACTTC 840
Db 781 GCTTCAGTAACCTCTTGACGTTGGATACCTTTGGCGGAGAAATGGAAATGAGTTTCACTTC 840

RESULT 2

US-09-811-007A-41
; Sequence 41, Application US/09811007A
; Patent No. 6660269
; GENERAL INFORMATION:
; APPLICANT: Walker, David H.
; APPLICANT: McBride, Jere W.
; APPLICANT: Yu, Xue-Jie
; TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein
; TITLE OF INVENTION: Genes of Ehrlichia canis and Uses Thereof
; FILE REFERENCE: D6152CIP2
; CURRENT APPLICATION NUMBER: US/09/811,007A
; CURRENT FILING DATE: 2001-10-23
; PRIOR APPLICATION NUMBER: 09/660,587
; PRIOR FILING DATE: 2000-09-12
; NUMBER OF SEQ ID NOS: 46
; SEQ ID NO 41
; LENGTH: 840
; TYPE: DNA
; ORGANISM: Ehrlichia canis
; FEATURE:
; OTHER INFORMATION: nucleic acid sequence of E. canis p28-2

US-09-811-007A-41
Query Match 100.0%; Score 840; DB 4; Length 840;
Best Local Similarity 100.0%; Pred. No. 1.1e-211;
Matches 840; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 ATGAAATTAAGAAAAATCTAGTAAGAGCGCGTTAATCTCATTAATGTCAATCTTACCA 60
Db 1 ATGAAATTAAGAAAAATCTAGTAAGAGCGCGTTAATCTCATTAATGTCAATCTTACCA 60
QY 61 TATCAGTCTTTTGCAGATCTCTGAGTTCAAGAACTAATGATAACAAGAGGCTTCTAC 120
Db 61 TATCAGTCTTTTGCAGATCTCTGAGTTCAAGAACTAATGATAACAAGAGGCTTCTAC 120
QY 121 ATTAGTCAAGATCAATCAAGATATATCACTTTAGAAAAATTTCTCTGCTGAAGAACT 180
Db 121 ATTAGTCAAGATCAATCAAGATATATCACTTTAGAAAAATTTCTCTGCTGAAGAACT 180

Db 121 ATTAGTCAAGATCAATCAAGTATATCACACTTTAGAAAAATTTCTCTGCTGAAGAACT 180
QY 181 CCTATTAAATGGAAACAAATTTCTCTCACTAAATAAGTTTTTCGGACTAAAGAAAGATGAT 240
Db 181 CCTATTAAATGGAAACAAATTTCTCTCACTAAATAAGTTTTTCGGACTAAAGAAAGATGAT 240
QY 241 ATAAACAAAAAGACGATTTTACAGAGTAGTCTCCAGGCAATGATTTTCAAAAATAAATCTTA 300
Db 241 ATAAACAAAAAGACGATTTTACAGAGTAGTCTCCAGGCAATGATTTTCAAAAATAAATCTTA 300
QY 301 ATATCAGGATTTTCAGGAAGTATTGGTTACTCTATGCGGACCAAGATAGAACTTGAA 360
Db 301 ATATCAGGATTTTCAGGAAGTATTGGTTACTCTATGCGGACCAAGATAGAACTTGAA 360
QY 361 GCTGCATATCAACAAATTTAATCCAAAAACACCGATAACAATGATATGATGTAATGTTGAA 420
Db 361 GCTGCATATCAACAAATTTAATCCAAAAACACCGATAACAATGATATGATGTAATGTTGAA 420
QY 421 TACTATAAAACATTTTGCATTTATCTCGTAAAGATGCAATGGAAGATCAGCAATATGTAGTA 480
Db 421 TACTATAAAACATTTTGCATTTATCTCGTAAAGATGCAATGGAAGATCAGCAATATGTAGTA 480
QY 481 CTTAAAAATGACGGCATAAATTTTATGTCATGATGGTTAATATCTGCTATGACATTACA 540
Db 481 CTTAAAAATGACGGCATAAATTTTATGTCATGATGGTTAATATCTGCTATGACATTACA 540
QY 541 GCTGAGGAGTATCTTTTCGTACCATATGATGTCAGGATATAGGAGCAGATCTTATCACT 600
Db 541 GCTGAGGAGTATCTTTTCGTACCATATGATGTCAGGATATAGGAGCAGATCTTATCACT 600
QY 601 ATTTTAAAGACCTCAATCTAAAATTTGCTTACCAAGGAAAAATAGGTATTAGTTACCCT 660
Db 601 ATTTTAAAGACCTCAATCTAAAATTTGCTTACCAAGGAAAAATAGGTATTAGTTACCCT 660
QY 661 ATCACACGAGAAGTCTCTGCAATTTATTTGGTGGATACCTACCATGGCGTTATTGGTAAATAA 720
Db 661 ATCACACGAGAAGTCTCTGCAATTTATTTGGTGGATACCTACCATGGCGTTATTGGTAAATAA 720
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Db 721 TTTGAGAAGATACCTGTAAATCACTCTGTTAGTATTAAATGATGCTCTCAACCATCT 780
QY 781 GCTTCAGTAACCTCTTGACGTTGGATACCTTTGGCGGAGAAATGGAAATGAGTTTCACTTC 840
Db 781 GCTTCAGTAACCTCTTGACGTTGGATACCTTTGGCGGAGAAATGGAAATGAGTTTCACTTC 840

RESULT 3

US-09-314-701-47
; Sequence 47, Application US/09314701
; Patent No. 6544517
; GENERAL INFORMATION:
; APPLICANT: Rikihisa, Yasuko
; APPLICANT: Ohasi, No. 6544517io
; TITLE OF INVENTION: Outer Membrane Protein of Ehrlichia Canis and Ehrlichia
; TITLE OF INVENTION: Chaffensis
; FILE REFERENCE: 22727/04021
; CURRENT APPLICATION NUMBER: US/09/314,701
; CURRENT FILING DATE: 1999-05-19
; NUMBER OF SEQ ID NOS: 66
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 47
; LENGTH: 843
; TYPE: DNA
; ORGANISM: Ehrlichia canis
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (1)..(843)
US-09-314-701-47

Query Match 100.0%; Score 840; DB 4; Length 843;
Best Local Similarity 100.0%; Pred. No. 1.1e-211;
Matches 840; Conservative 0; Mismatches 0; Indels 0; Gaps 0;


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Db |||
QY 1 ATGAATTATAAGAAAATTTCTAGTAAGAACGCGGTTAATCTCATTAATGTCAATCTTACCA 60
Db |||
QY 61 TATCAGTCTTTTGCAGATCCTGTAGTTCAAGAACTAATGATAACAAGAGGCTTCTAC 120
Db |||
QY 61 TATCAGTCTTTTGCAGATCCTGTAGTTCAAGAACTAATGATAACAAGAGGCTTCTAC 120
Db |||
QY 121 ATTAGTCAAAAGTCAAAATCCCAAGTATATACACTTTAGAAAATTTCTCTGTGAAAGAACT 180
Db |||
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Db |||
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Db |||
QY 181 CCTATTATGGAACAAATTTCTCTCACTHAAAAAGTTTTCGGACTAAAGAGATGGTGAT 240
Db |||
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Db |||
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Db |||
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Db |||
QY 301 ATATCAGGATTTTCAGGAAGTATTGGTTACTCTATGGACGGACCAAGATAGAACTTGAA 360
Db |||
QY 361 GCTGATATCAACRAATTTAATCCAAAAACACCGATACCAATGATCTGATAATGGTGAA 420
Db |||
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Db |||
QY 421 TACTATAAACATTTTGCATTAATCTCGTAAGATCAATGGAAGATCAGCAATATGTAGTA 480
Db |||
QY 481 CTTAAAAATGACGCAATACTTTTATGTCTATGGTTAATATCTTGCTATGACATTACA 540
Db |||
QY 481 CTTAAAAATGACGCAATACTTTTATGTCTATGGTTAATATCTTGCTATGACATTACA 540
Db |||
QY 541 GCTGAAGAGTATCTTTCGTACCATATGATGATGATGATGATGATGATGATGATGATGAT 600
Db |||
QY 541 GCTGAAGAGTATCTTTCGTACCATATGATGATGATGATGATGATGATGATGATGATGAT 600
Db |||
QY 601 ATTTTAAAGACCTCAATCTAAATTTTGTCTTACCAAGGAAATAGCTTATGATACCT 660
Db |||
QY 601 ATTTTAAAGACCTCAATCTAAATTTTGTCTTACCAAGGAAATAGCTTATGATACCT 660
Db |||
QY 661 ATCACACAGAGTCTCTGCAATTTATTTGGTGATACCTACCATGCGGTTATTTGGTAATAA 720
Db |||
QY 661 ATCACACAGAGTCTCTGCAATTTATTTGGTGATACCTACCATGCGGTTATTTGGTAATAA 720
Db |||
QY 721 TTTGAGAGATACCTGTAATTAATCTCTGATATTAATGATGATGATGATGATGATGATGAT 780
Db |||
QY 721 TTTGAGAGATACCTGTAATTAATCTCTGATATTAATGATGATGATGATGATGATGATGAT 780
Db |||
QY 781 GCTTCAGTAACCTTGAGTTGGATCTTTGGCGGAGAAATTTGGAATGAGGTTACCTTC 840
Db |||
QY 781 GCTTCAGTAACCTTGAGTTGGATCTTTGGCGGAGAAATTTGGAATGAGGTTACCTTC 840
Db |||
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RESULT 4

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US-09-314-701-3
; Sequence 3, Application US/09314701
; Patent No. 6544517
; GENERAL INFORMATION:
; APPLICANT: Rikihisa, Yasuko
; APPLICANT: Ohasi, No. 6544517io
; TITLE OF INVENTION: Outer Membrane Protein of Ehrlichia Canis and Ehrlichia
; TITLE OF INVENTION: Chaffeensis
; FILE REFERENCE: 22727/04021
; CURRENT APPLICATION NUMBER: US/09/314.701
; CURRENT FILING DATE: 1999-05-19
; NUMBER OF SEQ ID NOS: 66
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 3
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; LENGTH: 852
; TYPE: DNA
; ORGANISM: Ehrlichia chaffeensis
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (1)..(852)
US-09-314-701-3
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Query Match

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Best Local Similarity 71.3%; Score 598.6; DB 4; Length 852;
Matches 701; Conservative 0; Mismatches 139; Indels 9; Gaps 1;
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QY 1 ATGAATTATAAGAAAATTTCTAGTAAGAACGCGGTTAATCTCATTAATGTCAATCTTACCA 60
Db |||
QY 1 ATGAATTATAAGAAAATTTTGTGAAGCAGTGCAATTAATTTTCAATTAATGTCAATCTTACCT 60
Db |||
QY 61 TATCAGTCTTTTTCAGATCCTGTAGTTCAA-----GAACTAATGATAACAAGAA 111
Db |||
QY 61 TACCAATCTTTTTCAGATCCTGTAACTTCAATGATACAGGAATCAACGACGAGAGAA 120
Db |||
QY 112 GGCTTCTACATTAGTGCAAAGTACAATCCAAAGTATATCACACTTTTAGAAAATTTCTCTGCT 171
Db |||
QY 121 GGCTTCTACATTAGTGTAAAGTATATCCCAAGCATATCACACTTCAGAAAATTTCTCAGCT 180
Db |||
QY 172 GAAGAACTCTCTATTAATGGAAACAAATTTCTCTCACTAAAAAGTTTTCGGACTAAAGAAA 231
Db |||
QY 181 GAAGAACTCTCCATCAATGGAAATACCTTATCACTAAAAAGTTTTCGGGCTGAAAAA 240
Db |||
QY 232 GATGGTGATATAACAAAAAGACGATTTTACAAGAGTAGTCCAGGCAATGATTTTCAA 291
Db |||
QY 241 GACGGAGATATACCAATCTCGGAATTTTAAACGACAGATCCAGCCTCGAGTTTCAG 300
Db |||
QY 292 AATAAATTAATATCAGGATTTTTCAGGAAGTATTGGTTACTCTATGGAACGACCAAGAA 351
Db |||
QY 301 AATAAATTAATATCAGGATTTTTCAGGAAGTATTGGTTACTCTATGGAACGACCAAGAA 360
Db |||
QY 352 GAATTTGAAGTGCATATCAACAAATTTTAAATCCAAAAACACCGATACCAATGATGATGAT 411
Db |||
QY 361 GAATTTGAAGTGCATATCAACAAATTTTAAATGATGAAAAATCTTGACAAATGATGATGAT 420
Db |||
QY 412 AATGGTGATATATAACAAATTTTGAATATCTCGTAAGATGCAATGGAAGATGATGATGAT 471
Db |||
QY 421 AGCGTGATCTATATAATATCTTTGGACTATCTCGTAAGACGCAATAGCAGATAAGAA 480
Db |||
QY 472 TATGTAGTACTTAAAAATGACGCGCATAACTTTTATGTCTATGATGGTTAATATCTTGTCTAT 531
Db |||
QY 481 TATGTGTCTTAAAAATGAGGCAATCACTTTTATGTCTATGATGGTTAATATCTTGTCTAT 540
Db |||
QY 532 GACATTAAGTGAAGAGTATCTTTTCGTACCATATGATGATGATGATGATGATGATGATGAT 591
Db |||
QY 541 GACATTAAGTGAAGAGTATCTTTTCATACCGTATGATGATGATGATGATGATGATGATGAT 600
Db |||
QY 592 CTTATCACTATTTTAAAGACCTCAATCTAAAAATTTGCTTTACCAAGGAAAAATAGGTATT 651
Db |||
QY 601 CTTATCACTATTTTAAAGATTTTAAATTTTAAATTTTAAATTTTAAATTTTAAATTTTAA 660
Db |||
QY 652 AGTTACCTCTATCACACGAGAGTCTCTGCAATTTTATTTGGTGATATCACTACCAAGGAT 711
Db |||
QY 661 AGCTATCCAATCACACGAGAGTCTTCGCTTTTATTTGGAGGATATCACTACCAAGGAT 720
Db |||
QY 712 GGTAATAAATTTGAGAGATACCTGTAAATCACTCTCTGTGTAGTATTAATGATGATGATGAT 771
Db |||
QY 721 GGAATAAATTTTAAACAAATACCTGTAAATCACTCTGTGTAGTATTTAGAAAGGATGATGAT 780
Db |||
QY 772 ACCACATCTGCTTCAGTAATCTTTGAGGTTGGATCTTTTGGCGGAGAAATTTGGAATGAGG 831
Db |||
QY 781 ACAACATCTCGCTAGTAACTATTTGACATGAGGATCTTTTGGCGGAGAAATTTGGAATGAGG 840
Db |||
QY 832 TTCACCTTC 840
Db |||
QY 841 TTCACCTTC 849
Db |||
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RESULT 5
US-09-648-520E-48
; Sequence 48, Application US/09648520E
; Patent No. 6432649
; GENERAL INFORMATION:
; APPLICANT: Stich, Roger W.
; APPLICANT: Rikihisa, Yasuko
; TITLE OF INVENTION: Methods for Detecting Ehrlichia Canis and Ehrlichia Chaffeensis in Vertebrate and Invertebrate Hosts
; FILE REFERENCE: 22727/04069
; CURRENT APPLICATION NUMBER: US/09/648,520E
; CURRENT FILING DATE: 2000-08-25
; NUMBER OF SEQ ID NOS: 51
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 48
; LENGTH: 849
; TYPE: DNA
; ORGANISM: Ehrlichia chaffeensis p28
US-09-648-520E-48

Query Match      29.08; Score 243.4; DB 3; Length 849;
Best Local Similarity 52.3%; Pred. No. 1.9e-54;
Matches 447; Conservative 77; Mismatches 307; Indels 24; Gaps 4;

QY 1 ATGAATTATAGAAAAATCTAGTAAGAGCGGTTAATCTCATTAATGTCAATCTTACCA 60
DB 1 ATGAATTATAGAAAAATCTAGTAAGAGCGGTTAATCTCATTAATGTCAATCTTACCT 60
QY 61 TATCAGTCTTTTGCAGATCTCTGATGTTCAAGAACTAATGATACAAAGAGCTTCTAC 120
DB 61 TATCAGTCTTTTGCAGATCTCTGATGTTCAAGAACTAATGATACAAAGAGCTTCTAC 120
QY 61 GGAGTATCAITTTTCYAGCCCAAGAGGAGTGGTATTAAACGGYAAT-----TTCTAY 111
DB 61 GGAGTATCAITTTTCYAGCCCAAGAGGAGTGGTATTAAACGGYAAT-----TTCTAY 111
QY 121 ATTAGTCAAGATACATCAAGTATATACACTTTTAGAAAAATCTCTGCT---GAAGAA 177
DB 121 ATTAGTCAAGATACATCAAGTATATACACTTTTAGAAAAATCTCTGCT---GAAGAA 177
QY 112 ATCAGTGGAAAAATATATGCAAGAGCTTCGCAITTTGGRTTCTGCTAGGAGAA 171
DB 112 ATCAGTGGAAAAATATATGCAAGAGCTTCGCAITTTGGRTTCTGCTAGGAGAA 171
QY 178 ACTCTTATTAATGGAACAAATTTCTCACTAAAGAAAGTTTTCGCACTAAAGAAAGATGGT 237
DB 178 ACTCTTATTAATGGAACAAATTTCTCACTAAAGAAAGTTTTCGCACTAAAGAAAGATGGT 237
QY 172 AGAARTACAAGTGGAGTCTTTGGATGAGCAATTTGGGAGGAGGAGCAATAYCY 231
DB 172 AGAARTACAAGTGGAGTCTTTGGATGAGCAATTTGGGAGGAGGAGCAATAYCY 231
QY 238 GATATACAAAAAGACGATTTTACAAGAGTAGCTCCAGCAATGATTTTCAAAATAAC 297
DB 238 GATATACAAAAAGACGATTTTACAAGAGTAGCTCCAGCAATGATTTTCAAAATAAC 297
QY 232 MACWCYHMYMSRAHRMTVATVYACTGTCTCAAAATAYTCRTTTAAATATGAAAAAAY 291
DB 232 MACWCYHMYMSRAHRMTVATVYACTGTCTCAAAATAYTCRTTTAAATATGAAAAAAY 291
QY 298 TTAATATACGATTTTTCAGGAGTATTTGTTTACTCTATGACGACCAAGAAATAGACTT 357
DB 298 TTAATATACGATTTTTCAGGAGTATTTGTTTACTCTATGACGACCAAGAAATAGACTT 357
QY 292 CCTTTTATGGWTTTTCAGGAGCTTTTGGTACTTCAATGGATGGYCCAGAAATAGAGCT 351
DB 292 CCTTTTATGGWTTTTCAGGAGCTTTTGGTACTTCAATGGATGGYCCAGAAATAGAGCT 351
QY 358 GAAGCTGCATATCAACAAATTTAATCCAAAAACACCGATACCAATGATCTGATAATGGT 417
DB 358 GAAGCTGCATATCAACAAATTTAATCCAAAAACACCGATACCAATGATCTGATAATGGT 417
QY 352 GAAGTATCTTATGARACATTYATGATGTAAGAAATCAAGTAAACARYTAYAGAAAGCD 411
DB 352 GAAGTATCTTATGARACATTYATGATGTAAGAAATCAAGTAAACARYTAYAGAAAGCD 411
QY 418 GAATACATATAACATTTTGGCAATATCTCGTAAGATGCA-----ATGGAAGATCAG 468
DB 418 GAATACATATAACATTTTGGCAATATCTCGTAAGATGCA-----ATGGAAGATCAG 468
QY 412 CATAGRTAYTGTCTYATCYCRTMSRSYWCARBACARRCATGWSKAGTGCAARRTRAT 471
DB 412 CATAGRTAYTGTCTYATCYCRTMSRSYWCARBACARRCATGWSKAGTGCAARRTRAT 471
QY 469 CAATATCTAGTACTTAAATATGACGCAATCTTTTATGTCATTGATGTTAATATCTTGC 528
DB 469 CAATATCTAGTACTTAAATATGACGCAATCTTTTATGTCATTGATGTTAATATCTTGC 528
QY 472 AMWTTTGTYYTCTTAAAAAATGAAGGRTYACTTGACRTATCRITYATGCTGAAAGCATGC 531
DB 472 AMWTTTGTYYTCTTAAAAAATGAAGGRTYACTTGACRTATCRITYATGCTGAAAGCATGC 531
QY 529 TATGACATTTACAGCTGAAGGATATCTTTGTTACCATATGATGTCAGATGATAGAGCA 588
DB 529 TATGACATTTACAGCTGAAGGATATCTTTGTTACCATATGATGTCAGATGATAGAGCA 588
QY 532 TATGAYGTARTARGYGAAGGNATACCTTTTCTCCTTAYATATGYGAGGTATYGGKACT 591
DB 532 TATGAYGTARTARGYGAAGGNATACCTTTTCTCCTTAYATATGYGAGGTATYGGKACT 591
QY 589 GATCTTATACATATTTTAAAGACCTCAATCTAAAAATTTGCTTACCAAGAAAAATAGGT 648
DB 589 GATCTTATACATATTTTAAAGACCTCAATCTAAAAATTTGCTTACCAAGAAAAATAGGT 648
QY 592 GATTTAGTATCCATGTTTGAAGYTACAAYCCCTAAAAATTTCTTACCAAGAAAAATAGGT 651
DB 592 GATTTAGTATCCATGTTTGAAGYTACAAYCCCTAAAAATTTCTTACCAAGAAAAATAGGT 651
QY 649 ATTAGTTTACCTTATCACACGAGAGTCTCTGCAATTTTATGCTGATACCTACCTGGGTT 708
DB 649 ATTAGTTTACCTTATCACACGAGAGTCTCTGCAATTTTATGCTGATACCTACCTGGGTT 708
QY 652 TTAAGCTACTCTATPAAGCCCAAGAACCTCTGTSTTTTGTGGYGRCAITTYCATAGGTR 711
DB 652 TTAAGCTACTCTATPAAGCCCAAGAACCTCTGTSTTTTGTGGYGRCAITTYCATAGGTR 711
QY 709 ATTGGTAAATAATTTGAGAAGATACCTGTAAATACCTCCTGTAGTATTAAATGATGCTCCT 768
DB 709 ATTGGTAAATAATTTGAGAAGATACCTGTAAATACCTCCTGTAGTATTAAATGATGCTCCT 768
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Db 712 ATRGGAACGAATTYAGAGATATCTCTCTRTAATACCTAATGATCAASWCTTGCAGGA 771
QY 769 CAA---ACCACATCTGCTTCAGTCACTTGTAGCTTGGATACCTTGGCGGAGAAATGGA 825
Db 772 AMAGGRAAYYACCTGCAATAGTAAGTAACTAGTATGCCACTTTGGWATAGARCTTGA 831
QY 826 ATCAGGTTCCACCTTC 840
Db 832 GGAAGRTTTGCTTTC 846

RESULT 6
US-09-314-701-35
; Sequence 35, Application US/09314701
; Patent No. 6544517
; GENERAL INFORMATION:
; APPLICANT: Rikihisa, Yasuko
; APPLICANT: Ohasi, No. 6544517io
; TITLE OF INVENTION: Outer Membrane Protein of Ehrlichia Canis and Ehrlichia
; FILE REFERENCE: 22727/04021
; CURRENT APPLICATION NUMBER: US/09/314,701
; CURRENT FILING DATE: 1999-05-19
; NUMBER OF SEQ ID NOS: 66
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 35
; LENGTH: 924
; TYPE: DNA
; ORGANISM: Ehrlichia canis
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (1)..(924)
US-09-314-701-35

Query Match      28.4%; Score 238.4; DB 4; Length 924;
Best Local Similarity 57.7%; Pred. No. 4e-53;
Matches 486; Conservative 0; Mismatches 346; Indels 10; Gaps 3;

QY 1 ATGAATTATAGAAAAATTTCTAGTAAGAGCGGTTAATCTCATTAATGTCAATCTTACCA 60
DB 88 ATGAATTGCAAAAAAATTTCTTATACAACTGCATTAATATCATTAATGACTCTATTTCCA 147
QY 61 TATCAGTCTTTTGCAGATCTCTGATGTTCAAGAACTAATGATACAAAGAGGCTTCTAC 120
DB 148 AGCATATCTTTTCTGATATCTATCAAGATGGTAAACATGGTGGTAA-----CTTCTAT 201
QY 121 ATTAGTCAAGATPACAAATCAAAGTATATCACACTTTTAGAAAAATTTCTGCTGAAGA--AA 178
DB 202 ATTAGTGGAAAGTATGTACCAAGTGTCTCACATTTTGGTAGCTTCTCAGCTAAAGAAGA 261
QY 179 CTCCTATTAAATGGAACAAATTTCTCCTCACTAAAAAGTTTTCGCACTAAAGAAAGATGGT 238
DB 262 AGCAATCAACTGTTGGAGTTTTTGGATTTAAACATGATTTGGGATGGAGTCCAATCT - 320
QY 239 ATATAACAAAAAAGACGATTTTACAAGAGTAGTCTCCAGGCAATGATTTTCAAAAATAACT 298
DB 321 -TAAGATATAACAGCTGACTTTACTGTTCCAAACTATTTCGTTTCAGATACGAGCAATC 379
QY 299 TAATATCAGATTTTTCAGGAAGTATTTGGTTACTCTATGAGACGGACCAAGAAATAGAACTTG 358
DB 380 CATTTCTAGGGTTTTCAGGAGCTATCGGTTACTCAATGGGTGGCCCAAGAAATAGAAATTCG 439
QY 359 AGCTGCATATCAACAAATTTTAAATCCAAAAACACCGATACCAATGATCTGATAATGGTG 418
DB 440 AAATATCTTATGAAGCAITTCGAGTAAAGAGTCTTAATATCAATTAATCAAAATGACCGCG 499
QY 419 AATACATATAAACATTTTTCGATTTATCTCGTAAAGATGCAATGGAAGATCAGCAATATGTAG 478
DB 500 ACAGGTACTCGGCTCTATCTCATCACATCGSCAGCAGTGAAGCTGATAAATTTGTCT 559
QY 479 TACTTAAAAATAGCGGCAATACTTTTATGTCATTTGTTTAAATACTTGTCTATGACATTA 538
DB 479 TACTTAAAAATAGCGGCAATACTTTTATGTCATTTGTTTAAATACTTGTCTATGACATTA 538
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Db 560 TCTTAAAAACGAGGGTTAATTGACATATCACTTGGCAATAAATGCATGTTTATGATATA 619
Qy 539 CAGCTGAAGAGATATCTTTTCGTACCATATGCATGTCAGGATATAGGACAGATCTTATCA 598
Db 620 TAAATGACAAAGTACTCTTCTTATATATATGCGCAGGTATTGGTACTGATTGATTT 679
Qy 599 CTATTTTAAAGACCTCAATCTTAAATTTGCTTACCAAGGAAATATAGTATTAGTTACC 658
Db 680 CTATGTTTGAAGCTACAAGTCTTAAATTTCTCTACCAAGGAAATATAGTATTAGTTACT 739
Qy 659 CTATCACACCAAGTCTCTGCAATTTATTTGGTGGATCACTACCATGGCGCTTATTTGTAATA 718
Db 740 CTATTAATCCGGAACCTCTGTTTTCATCGTGGGCAATTTCCACAGGATCATAGGTAATG 799
Qy 719 AATTGAGAAGATCTGTATTAATCTCTGTAGTATTAATTAATGATGCTCCTCAAAACCAAT 778
Db 800 AGTTTATAGATATTTCTCTGCAATAGTACCTAGTAACTCAACTACAATAAGTGGACCAAT 859
Qy 779 CTGCTTCAAGTACTCTTACAGTTCGATCTTTTGGCGGAGAAATTCGATGAGGTTCACT 838
Db 860 TTGCACAGTAACACTAAATGTGTGTCACCTTTGGTTTGAACCTTTGGAGGAAGATTAACT 919
Qy 839 TC 840
Db 920 TC 921
RESULT 7
US-09-660-587-1
; Sequence 1, Application US/09660587
; Patent No. 6392023
; GENERAL INFORMATION:
; APPLICANT: Walker, David H.
; APPLICANT: McBride, Jere W.
; APPLICANT: Yu, Xue-Jie
; TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein
; TITLE OF INVENTION: Genes of Ehrlichia canis and Uses Thereof
; FILE REFERENCE: D6152CIP2
; CURRENT APPLICATION NUMBER: US/09/660,587
; CURRENT FILING DATE: 2000-09-12
; PRIOR APPLICATION NUMBER: 09/261,358
; PRIOR FILING DATE: 1999-03-03
; NUMBER OF SEQ ID NOS: 46
; SEQ ID NO 1
; LENGTH: 1607
; TYPE: DNA
; ORGANISM: Ehrlichia canis
; FEATURE:
; OTHER INFORMATION: nucleic acid sequence of E. canis p28-7
US-09-660-587-1
Query Match 28.4%; Score 238.4; DB 3; Length 1607;
Best Local Similarity 57.7%; Pred. No. 4.9e-53;
Matches 486; Conservative 0; Mismatches 346; Indels 10; Gaps 3;
Qy 1 ATGAATTATAGAAAATTTCTAGTAAAGCGCGTTAATCTCAATTAATGTCAATCTTACCA 60
Db 146 ATGAATTCGAAAAAATTTCTTATAACAACTGCAATTAATCAATTAATGTTACTCTATTCCA 205
Qy 61 TATCAGTCTTTTGCAGATCTCTGATGTTTCAGAACTAATGATATAACAAGAGGCTTCTAC 120
Db 206 AGCATATCTTTTCTGTACTATATCAAGATGTAACATGGGTGGTAA-----CTTCTAT 259
Qy 121 ATTAGTCAAAAGTACAAATCCCAAGTATATCACACTTTAGAAAATTTCTGTGTGAAGA--AA 178
Db 260 ATTAGTGAAGATGATGACCAAGTCTCTCAATTTTGGTACTTCTCAGCTTAAGAAGAA 319
Qy 179 CTCCTATTAAATGGAACAAATTTCTCTCACTAAAAAGTTTTCGGACTAAAGAAAGATGGT 238
Db 320 AGCAAAATCAACTGTTGGAGTTTTTGGATTTAAACATGATTTGGGATGGAAGTCCAATACT- 378
Qy 239 ATATAACAAAAAAGACCAATTTTACAAGATGATGCTCCAGGCATTTGATTTCAAAATTA 298

Db 379 -TAAGANAATAACACGCTGACTTTTACTGTTCCAAACTATTCGTTCCAGATACGAGAACAACT 437
Qy 299 TAATATCAGGATTTTTCAGGAAGTATTGGTTACTCTATGGACGACCAAGAAATAGAACTTG 358
Db 438 CATTTCTAGGGTTTTCAGGAGCTATCGTTTACTCAATGGGTGGCCCAAGAAATAGAACTG 497
Qy 359 AAGCTGATATCAACAATTTAATCCAAAAACACCGATATAACAATGATCTGATTAATGGTG 418
Db 498 AAATATCTTATGAGCATTCGACGTAAAAAGTCTCTAATATCAATATATCAAAATGACGCG 557
Qy 419 AATACTATAAACAATTTTTCATTTCTCTGTAAGATGCAATGGAAGATCAGCAATATGTAG 478
Db 558 ACAGTACTGGCTCTATCTCATCACATCGGACGCACTGGAAGCTGATATAATTTGCT 617
Qy 479 TACTTAAAAATGACGGCAATACTTTTATGTCATTTGATGTTTAAATATCTTGTCTATGACATTA 538
Db 618 TCTTAAAAAACGAGGGTTAATTTGACATATCACCTTGCATAAATGCAATGTCATGTTATGATATA 677
Qy 539 CAGCTGAAGAGTATCTTTTCGTACCATATGATGTCAGGATATAGGAGCAGATCTTATCA 598
Db 678 TAAATGACAAGTACCTGTTTCTCTTATATATGCGCAGGTATTTGGTACTGATTTGATTT 737
Qy 599 CTATTTTAAAGACCTCAATCTAAATTTTCTTACCAAGGAAAAATAGTATTAGTTACC 658
Db 738 CTATGTTTGAAGCTACAAGTCTTAAATTTCTTACCAAGGAAAACTGGGCAATTAGTTACT 797
Qy 659 CTATCACACCAAGTCTCTGCAATTTTATGTTGGATCTACTACCATGGCGTTTATTTGTAATA 718
Db 798 CTATTAATCCGGAACCTCTGTTTTCATCGTGGGCAATTTCCACAGGATCATAGGTAATG 857
Qy 719 AATTGAGAAGATCTGTAATACTCTCTGTAGTATTAATGATGTCCTCAAAACCAAT 778
Db 858 AGTTTATAGATATTTCTCTGCAATAGTACTAGTAACTCAACTACAATAAGTGGACCAAT 917
Qy 779 CTGCTTCAAGTAACTTTGAGCTTGGATCTTTGCGGAGAAATTTGGAATGAGGTTCACT 838
Db 918 TTGCAACAGTAACACTAAATGTGTGTTGTTAGAACTTTGAGGAGAGATTAACT 977
Qy 839 TC 840
Db 978 TC 979
RESULT 8
US-09-261-358A-1
; Sequence 1, Application US/09261358A
; Patent No. 6403780
; GENERAL INFORMATION:
; APPLICANT: Walker, David H.
; APPLICANT: McBride, Jere W.
; APPLICANT: Yu, Xue-Jie
; TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein
; TITLE OF INVENTION: Genes of Ehrlichia canis and Uses Thereof
; FILE REFERENCE: D6152CIP
; CURRENT APPLICATION NUMBER: US/09/261,358A
; CURRENT FILING DATE: 1999-03-03
; PRIOR APPLICATION NUMBER: 09/201,458
; PRIOR FILING DATE: 1998-11-30
; NUMBER OF SEQ ID NOS: 33
; SEQ ID NO 1
; LENGTH: 1607
; TYPE: DNA
; ORGANISM: Ehrlichia canis
; FEATURE:
; OTHER INFORMATION: nucleic acid sequence of Ec28-1
US-09-261-358A-1
Query Match 28.4%; Score 238.4; DB 3; Length 1607;
Best Local Similarity 57.7%; Pred. No. 4.9e-53;
Matches 486; Conservative 0; Mismatches 346; Indels 10; Gaps 3;
Qy 1 ATGAATTATAGAAAATTTCTAGTAAAGCGCGTTAATCTCAATTAATGTCAATCTTACCA 60


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; Sequence 1, Application US/09201458A
; Patent No. 6458942
; GENERAL INFORMATION:
; APPLICANT: Walker, David H.
; APPLICANT: McBride, Jere W.
; APPLICANT: Yu, Xue-Jie
; TITLE OF INVENTION: 28-kDa Immunoreactive Protein Gene of Ehrlichia
; TITLE OF INVENTION: canis and Uses Thereof
; FILE REFERENCE: D6152
; CURRENT APPLICATION NUMBER: US/09/201.458A
; CURRENT FILING DATE: 1998-11-30
; NUMBER OF SEQ ID NOS: 21
; SEQ ID NO 1
; LENGTH: 1607
; TYPE: DNA
; ORGANISM: Ehrlichia canis
; FEATURE:
; OTHER INFORMATION: nucleic acid sequence of a gene encoding a 30 kDa
; OTHER INFORMATION: immunoreactive protein of Ehrlichia canis
; US-09-201-458-1

Query Match      28.4%; Score 238.4; DB 3; Length 1607;
Best Local Similarity 57.7%; Pred. No. 4.9e-53;
Matches 486; Conservative 0; Mismatches 346; Indels 10; Gaps 3;

Qy      1 ATGAATTATAGAAAATTTCTAGTAGAAGCGCGTAAATCTCAATTAATGTCAATCTTACCA 60
Db      |||||
Db      146 ATGAATTGCAAAAAAATTTCTATACCAACTGCATTAATATCAATTAATGTCTCTATTTCCA 205
Qy      61 TATCAGTCTTTTGCAGACTCTGTAGTTTCAAGAACTAATGATGATACAAAGAGCGTCTCTAC 120
Db      |||||
Db      206 AGCATATCTTTTCTGATCTATACAGATGGTAACTATGTTTCTTCTAT 259
Qy      121 ATTAGTGCAAAGTACAAATCTCAAGTATATACACTTTTAGAAAAATTTCTCTGCTGAAGA-AA 178
Db      |||||
Db      260 ATTAGTGGAAAGTATGTACCAAGTGTCTCACATTTTGGTAGCTTCTCAGCTAAAGAAGAA 319
Qy      179 CTCCTATTATAGAACAAATTTCTCTCACTAAAAAGTTTTCGGACTAAAAAGAGATGGTG 238
Db      |||||
Db      320 AGCAATATCAACTGTGGAGTTTGTGGATTAAAAACATGATTTGGATGGAGTCCCAATACT- 378
Qy      239 ATATACAAAAAAAGACGATTTTACAAGAGTAGCTCCAGGCATTTGATTTTCAAAATAACT 298
Db      |||||
Db      379 -TAAGATAAACACGCTGACTTTTACTGTTCCAAACTATTTCGTTCAGATACGAGACATC 437
Qy      299 TAATATCAGGATTTTCAGGAAGTATTTGGTTACTCTATGACCGACCAAGAAATAGAACTTG 358
Db      |||||
Db      438 CATTTCTAGGGTTTGCAGGAGCTATCGGTTACTCAATGGGTGGCCCAAGAATAGAAATTCG 497
Qy      359 AAGCTGCATATCAACAAATTTTATCCAAAAACACCCATAACATGATGATGATTAATGGTG 418
Db      |||||
Db      498 AATATCTTATGAAGCATTTGACGTAATTCGACGTAAAAAGTCTTAATATCAATATGACGCGC 557
Qy      419 AATACTATAAACATTTTGTGATTTCTCGTAAAGATGCAATGGAAGATCAGCAATATGTAG 478
Db      |||||
Db      558 ACAGGTACTCGGCTCTATCTCATCACACATCGCGAGCCATCGGAAGCTGATAAATTTGTCT 617

Qy      1 ATGAATTATAGAAAATTTCTAGTAGAAGCGCGTAAATCTCAATTAATGTCAATCTTACCA 60
Db      |||||
Db      146 ATGAATTGCAAAAAAATTTCTATACCAACTGCATTAATATCAATTAATGTCTCTATTTCCA 205
Qy      61 TATCAGTCTTTTGCAGACTCTGTAGTTTCAAGAACTAATGATGATACAAAGAGCGTCTCTAC 120
Db      |||||
Db      206 AGCATATCTTTTCTGATCTATACAGATGGTAACTATGTTTCTTCTAT 259
Qy      121 ATTAGTGCAAAGTACAAATCTCAAGTATATACACTTTTAGAAAAATTTCTCTGCTGAAGA-AA 178
Db      |||||
Db      260 ATTAGTGGAAAGTATGTACCAAGTGTCTCACATTTTGGTAGCTTCTCAGCTAAAGAAGAA 319
Qy      179 CTCCTATTATAGAACAAATTTCTCTCACTAAAAAGTTTTCGGACTAAAAAGAGATGGTG 238
Db      |||||
Db      320 AGCAATATCAACTGTGGAGTTTGTGGATTAAAAACATGATTTGGATGGAGTCCCAATACT- 378
Qy      239 ATATACAAAAAAAGACGATTTTACAAGAGTAGCTCCAGGCATTTGATTTTCAAAATAACT 298
Db      |||||
Db      379 -TAAGATAAACACGCTGACTTTTACTGTTCCAAACTATTTCGTTCAGATACGAGACATC 437
Qy      299 TAATATCAGGATTTTTCAGGAAGTATTTGGTTACTCTATGACCGACCAAGAAATAGAACTTG 358
Db      |||||
Db      438 CATTTCTAGGGTTTGCAGGAGCTATCGGTTACTCAATGGGTGGCCCAAGAATAGAAATTCG 497
Qy      359 AAGCTGCATATCAACAAATTTTATCCAAAAACACCGATAACATGATGATGATTAATGGTG 418
Db      |||||
Db      498 AATATCTTATGAAGCATTTGACGTAATTCGACGTAAAAAGTCTTAATATCAATATGACGCGC 557
Qy      419 AATACTATAAACATTTTGTGATTTCTCGTAAAGATGCAATGGAAGATCAGCAATATGTAG 478
Db      |||||
Db      558 ACAGGTACTCGGCTCTATCTCATCACACATCGCGAGCCATCGGAAGCTGATAAATTTGTCT 617

Qy      1 ATGAATTATAGAAAATTTCTAGTAGAAGCGCGTAAATCTCAATTAATGTCAATCTTACCA 60
Db      |||||
Db      146 ATGAATTGCAAAAAAATTTCTATACCAACTGCATTAATATCAATTAATGTCTCTATTTCCA 205
Qy      61 TATCAGTCTTTTGCAGACTCTGTAGTTTCAAGAACTAATGATGATACAAAGAGCGTCTCTAC 120
Db      |||||
Db      206 AGCATATCTTTTCTGATCTATACAGATGGTAACTATGTTTCTTCTAT 259
Qy      121 ATTAGTGCAAAGTACAAATCTCAAGTATATACACTTTTAGAAAAATTTCTCTGCTGAAGA-AA 178
Db      |||||
Db      260 ATTAGTGGAAAGTATGTACCAAGTGTCTCACATTTTGGTAGCTTCTCAGCTAAAGAAGAA 319
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Db      320 AGCAATATCAACTGTGGAGTTTGTGGATTAAAAACATGATTTGGATGGAGTCCCAATACT- 378
Qy      239 ATATACAAAAAAAGACGATTTTACAAGAGTAGCTCCAGGCATTTGATTTTCAAAATAACT 298
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Db      379 -TAAGATAAACACGCTGACTTTTACTGTTCCAAACTATTTCGTTCAGATACGAGACATC 437
Qy      299 TAATATCAGGATTTTTCAGGAAGTATTTGGTTACTCTATGACCGACCAAGAAATAGAACTTG 358
Db      |||||
Db      438 CATTTCTAGGGTTTGCAGGAGCTATCGGTTACTCAATGGGTGGCCCAAGAATAGAAATTCG 497
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Db      498 AATATCTTATGAAGCATTTGACGTAATTCGACGTAAAAAGTCTTAATATCAATATGACGCGC 557
Qy      419 AATACTATAAACATTTTGTGATTTCTCGTAAAGATGCAATGGAAGATCAGCAATATGTAG 478
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Db      498 AATATCTTATGAAGCATTTGACGTAATTCGACGTAAAAAGTCTTAATATCAATATGACGCGC 557
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Db 769 GAAACCAATTTGCAATAGTAACACTAAATGTGTGTCACCTTTGGCATAGAACTTGGAGGA 828
Qy 829 AGGTTACCTTC 840
Db 829 AGATTTAACTTC 840
RESULT 15
US-09-314-701-37
; Sequence 37, Application US/09314701
; Patent No. 6544517
; GENERAL INFORMATION:
; APPLICANT: Rikihisa, Yasuko
; APPLICANT: Ohsei, No. 6544517io
; TITLE OF INVENTION: Outer Membrane Protein of Ehrlichia Canis and Ehrlichia
; FILE OF INVENTION: Chafreensis
; FILE REFERENCE: 22727/04021
; CURRENT APPLICATION NUMBER: US/09/314,701
; CURRENT FILING DATE: 1999-05-19
; NUMBER OF SEQ ID NOS: 66
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 37
; LENGTH: 843
; TYPE: DNA
; ORGANISM: Ehrlichia canis
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (1)..(843)
US-09-314-701-37

Query Match 27.7%; Score 232.4; DB 4; Length 843;
Best Local Similarity 58.9%; Pred. No. 1.5e-51;
Matches 502; Conservative 0; Mismatches 326; Indels 24; Gaps 5;
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Qy 61 TATCAGTCTTTTGCAGATCTCTGTAGGTTCAAGAACTAATGATAACAAGAGGCTTCTAC 120
Db 61 AGCATATCTTTTCTGTACTATACAAAG-----ACGATAACACACTGGTAGCTTCTAC 111
Qy 121 ATTAGTGCAAGTACAACTCAAGTATATCACATTTTAGAAAAATTTCTGCTGAAGA--AA 178
Db 112 ATCAGTGGAAATATGTACCAAGTGTTCACATTTTGGTGTCTTCAGCTAAGAGAA 171
Qy 179 CTCCTATTAATGGAAACAAATCTCTCAATAAAAGTTTTCGGACTAAAGAAAGATGGTG 238
Db 172 AGAAACTCAACTGTTGGAGTTTTTGGATTAAAAACATGATTGGAATGGAGGTACAATATCT 231
Qy 239 ATATAACAAAAAAGACGATTTTACAGAGTAGCTCCAGGCGATGATTTTC-AAAAATAC 297
Db 232 AACTCTTCTCCAGAAAAATATATTCACAGTTCAAAATTTATTCGTTTAAATACGAAAAACA 291
Qy 298 TTAATATCAGGATTTTCAGGAAGTATTTGGTTACTCTATGGACGACCAAGAATAGAACTT 357
Db 292 CCATCTTAGGGTTTGAGAGCTATTTGGTTTATTCATGGGTGGCCCAAGATAGAACTT 351
Qy 358 GAAGCTGCATATCAACAAATTTAATCCAAAAACACCGATACCAATGATGATGATAATGGT 417
Db 352 GAAGTCTGTACGAGACATTCGATGTGAAAAATCAGAAACAATAATTAAGAACGGCGCA 411
Qy 418 GAATACTATAACACATTTTGCATTATCTCGTAAGATGCAATG-----GAAGATCAG 468
Db 412 CACAGATACGTGCTTTTATCTCATCATAGTTCAGCAACAACATGTCCTCCGCAAGTAAC 471
Qy 469 CAATATGTAGTACTTAAAAATGACGGCAATACTTTTATGTCAATGTGTTAATACTTGC 528
Db 472 AAATTTGTTTCTTAAAAAATGAAGGGTAAATGACCTTATCATTTATGATAAATGCATGC 531
Qy 529 TATGACATTAACAGCTGAAGAGATATCTTTTCGTACCATATGATGCGAGGTATAGGACCA 588
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Qy 589 GATCTTATCACTATTTTAAAGACCTCAATCTAAATTTGCTTACCAAGAAAAATAGGT 648
Db 592 GATGTTGTTTCCATGTTTGAAGCTATAAATCTTAAATTTCTTACCAAGAAAACTAGGA 651
Qy 649 ATTAGTTACCTTATCACACCAGAAAGTCTCTGCATTTTATTTGGTGGATACTACCATGCGGT 708
Db 652 TTAGGTTATAGTATAAGTTTCAGAAAGCTCTGTTTATCGGTGGACACTTTTCACAGATC 711
Qy 709 ATTGGTAATAAATTTTGAGAAAGATACCTGTAATAACTCTCTGTAGTATTAATGATGCTCCT 768
Db 712 ATAGGTAATAAATTTTAGAGACATCCCTGCTATGGTTCTCTAGTGGATCAA---ATCTTCCA 768
Qy 769 CAAACACACATCTGCTTCAGTAACTCTTGACGTTGGATACCTTTGGCGAGAAAAATTGGAATG 828
Db 769 GAAACCAATTTGCAATAGTAACACTAAATGTGTGTCACCTTTGGTTTAGAACTTGGAGGA 828
Qy 829 AGGTTACCTTC 840
Db 829 AGATTTAACTTC 840

Search completed: August 30, 2005, 09:27:59
Job time : 1474 secs

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OM protein - protein search, using sw model

Run on: August 27, 2005, 08:41:33 ; Search time 3.31373 Seconds
(without alignments)
585.708 Million cell updates/sec

Title: US-10-680-349-42_COPY_61_86
Perfect score: 136
Sequence: 1 PINGTNSLTKKVFGKKGDIITKKDD 26

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 513545 seqs, 74649064 residues

Total number of hits satisfying chosen parameters: 513545

Minimum DB seq length: 0
Maximum DB seq length: 2000000000
Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Issued Patents AA.*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	136	100.0	280	3	US-09-660-587-42
2	136	100.0	280	4	US-09-314-701-48
3	136	100.0	280	4	US-09-811-007A-42
4	97	71.3	283	3	US-09-660-587-10
5	97	71.3	283	4	US-09-261-358A-10
6	97	71.3	283	4	US-09-201-458-6
7	97	71.3	283	4	US-09-314-701-4
8	97	71.3	283	4	US-09-811-007A-10
9	52	38.2	378	4	US-09-134-000C-5909
10	50	36.8	284	3	US-09-660-587-15
11	50	36.8	284	4	US-09-261-358A-15
12	50	36.8	284	4	US-09-201-458-11
13	50	36.8	284	4	US-09-811-007A-15
14	49	36.0	629	4	US-10-081-923-6
15	49	36.0	1833	4	US-08-621-944A-4
16	49	36.0	1833	4	US-08-945-567D-4
17	49	36.0	1992	4	US-08-621-944A-3
18	49	36.0	1992	4	US-08-945-567D-3
19	49	36.0	2048	3	US-09-268-347-48
20	48.5	35.7	416	1	US-08-464-523B-33
21	48.5	35.7	476	4	US-09-800-170-19
22	48	35.3	226	4	US-09-071-035-120
23	48	35.3	252	4	US-09-071-035-118
24	48	35.3	293	3	US-09-660-587-40
25	48	35.3	293	4	US-09-314-701-44
26	48	35.3	293	4	US-09-811-007A-40
27	48	35.3	300	4	US-09-314-701-50

28 47.5 34.9 295 3 US-09-150-133-13 Sequence 13, Appl
29 47.5 34.9 295 3 US-09-150-141-13 Sequence 13, Appl
30 47.5 34.9 295 3 US-09-374-493-13 Sequence 13, Appl
31 47.5 34.9 295 3 US-09-374-824-13 Sequence 13, Appl
32 47.5 34.9 295 3 US-09-374-492-13 Sequence 13, Appl
33 47.5 34.9 295 4 US-09-785-343-13 Sequence 13, Appl
34 47.5 34.9 295 4 US-10-411-376-13 Sequence 13, Appl
35 47.5 34.9 2023 4 US-09-491-356C-8 Sequence 8, Appl
36 47.5 34.9 2074 4 US-09-491-356C-9 Sequence 9, Appl
37 47.5 34.9 2124 4 US-09-538-092-1377 Sequence 1377, Ap
38 47 34.6 291 4 US-09-314-701-18 Sequence 18, Appl
39 47 34.6 936 5 PCT-US93-05944-2 Sequence 2, Appl
40 47 34.6 1008 4 US-09-308-453-2 Sequence 2, Appl
41 47 34.6 1118 3 US-09-379-523-3 Sequence 3, Appl
42 46.5 34.2 67 4 US-09-248-796A-22381 Sequence 2381, A
43 46.5 34.2 947 2 US-08-500-857A-4 Sequence 4, Appl
44 46.5 34.2 953 2 US-08-500-857A-2 Sequence 2, Appl
45 46.5 34.2 955 2 US-08-500-857A-10 Sequence 10, Appl

ALIGNMENTS

RESULT 1

US-09-660-587-42
; Sequence 42, Application US/09660587
; Patent No. 6392023
; GENERAL INFORMATION:
; APPLICANT: Walker, David H.
; APPLICANT: McBride, Jere W.
; APPLICANT: Yu, Xue-Jie
; TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein
; TITLE OF INVENTION: Genes of Ehrlichia canis and Uses Thereof
; FILE REFERENCE: D6152CIP2
; CURRENT APPLICATION NUMBER: US/09/660,587
; CURRENT FILING DATE: 2000-09-12
; PRIOR APPLICATION NUMBER: 09/261,358
; PRIOR FILING DATE: 1999-03-03
; NUMBER OF SEQ ID NOS: 46
; SEQ ID NO 42
; LENGTH: 280
; TYPE: PRT
; ORGANISM: Ehrlichia canis
; FEATURE:
; OTHER INFORMATION: amino acid sequence of E. canis p28-2 protein
US-09-660-587-42

Query Match 100.0%; Score 136; DB 3; Length 280;
Best Local Similarity 100.0%; Pred. No. 5.6e-12;
Matches 26; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PINGTNSLTKKVFGKKGDIITKKDD 26
Db 61 PINGTNSLTKKVFGKKGDIITKKDD 86

RESULT 2

US-09-314-701-48
; Sequence 48, Application US/09314701
; Patent No. 6544517
; GENERAL INFORMATION:
; APPLICANT: Rikihisa, Yasuko
; APPLICANT: Ohasi, No. 6544517io
; TITLE OF INVENTION: Outer Membrane Protein of Ehrlichia Canis and Ehrlichia
; TITLE OF INVENTION: Chaffeeensis
; FILE REFERENCE: 22727/04021
; CURRENT APPLICATION NUMBER: US/09/314,701
; CURRENT FILING DATE: 1999-05-19
; NUMBER OF SEQ ID NOS: 66
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 48
; LENGTH: 280
; TYPE: PRT

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; ORGANISM: Ehrlichia canis
US-09-314-701-48

Query Match      100.0%; Score 136; DB 4; Length 280;
Best Local Similarity 100.0%; Pred. No. 5.6e-12;
Matches 26; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 PINGTNSLTKKVFGGLKKGDIYKDD 26
   |||||:|||||:|||||:
Db 61 PINGTNSLTKKVFGGLKKGDIYKDD 86

RESULT 3
US-09-811-007A-42
; Sequence 42, Application US/09811007A
; Patent No. 6660269
; GENERAL INFORMATION:
; APPLICANT: Walker, David H.
; APPLICANT: McBride, Jere W.
; APPLICANT: Yu, Xue-Jie
; TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein
; TITLE OF INVENTION: Genes of Ehrlichia canis and Uses Thereof
; FILE REFERENCE: D6152CIP2
; CURRENT APPLICATION NUMBER: US/09/811.007A
; CURRENT FILING DATE: 2001-10-23
; PRIOR APPLICATION NUMBER: 09/660,587
; PRIOR FILING DATE: 2000-09-12
; NUMBER OF SEQ ID NOS: 46
; SEQ ID NO 42
; LENGTH: 280
; TYPE: PRT
; ORGANISM: Ehrlichia canis
; FEATURE:
; OTHER INFORMATION: amino acid sequence of E. canis p28-2 protein
US-09-811-007A-42

Query Match      100.0%; Score 136; DB 4; Length 280;
Best Local Similarity 100.0%; Pred. No. 5.6e-12;
Matches 26; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 PINGTNSLTKKVFGGLKKGDIYKDD 26
   |||||:|||||:|||||:
Db 61 PINGTNSLTKKVFGGLKKGDIYKDD 86

RESULT 4
US-09-660-587-10
; Sequence 10, Application US/09660587
; Patent No. 6392023
; GENERAL INFORMATION:
; APPLICANT: Walker, David H.
; APPLICANT: McBride, Jere W.
; APPLICANT: Yu, Xue-Jie
; TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein
; TITLE OF INVENTION: Genes of Ehrlichia canis and Uses Thereof
; FILE REFERENCE: D6152CIP2
; CURRENT APPLICATION NUMBER: US/09/660,587
; CURRENT FILING DATE: 2000-09-12
; PRIOR APPLICATION NUMBER: 09/261,358
; PRIOR FILING DATE: 1999-03-03
; NUMBER OF SEQ ID NOS: 46
; SEQ ID NO 10
; LENGTH: 283
; TYPE: PRT
; ORGANISM: Ehrlichia chaffeensis
; FEATURE:
; OTHER INFORMATION: amino acid sequence of E. chaffeensis OMP-1B
US-09-660-587-10

Query Match      71.3%; Score 97; DB 3; Length 283;
Best Local Similarity 78.3%; Pred. No. 2.7e-06;
Matches 18; Conservative 2; Mismatches 3; Indels 0; Gaps 0;

; ORGANISM: Ehrlichia canis
US-09-261-358A-10

Query Match      71.3%; Score 97; DB 4; Length 283;
Best Local Similarity 78.3%; Pred. No. 2.7e-06;
Matches 18; Conservative 2; Mismatches 3; Indels 0; Gaps 0;

QY 1 PINGTNSLTKKVFGGLKKGDIYK 23
   |||||:|||||:|||||:
Db 64 PINGTNSLTKKVFGGLKKGDIYK 86

RESULT 5
US-09-261-358A-10
; Sequence 10, Application US/09261358A
; Patent No. 6403780
; GENERAL INFORMATION:
; APPLICANT: Walker, David H.
; APPLICANT: McBride, Jere W.
; APPLICANT: Yu, Xue-Jie
; TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein
; TITLE OF INVENTION: Genes of Ehrlichia canis and Uses Thereof
; FILE REFERENCE: D6152CIP
; CURRENT APPLICATION NUMBER: US/09/261,358A
; CURRENT FILING DATE: 1999-03-03
; PRIOR APPLICATION NUMBER: 09/201,458
; PRIOR FILING DATE: 1998-11-30
; NUMBER OF SEQ ID NOS: 33
; SEQ ID NO 10
; LENGTH: 283
; TYPE: PRT
; ORGANISM: Ehrlichia chaffeensis
; FEATURE:
; OTHER INFORMATION: amino acid sequence of E. chaffeensis OMP-1B
US-09-261-358A-10

Query Match      71.3%; Score 97; DB 4; Length 283;
Best Local Similarity 78.3%; Pred. No. 2.7e-06;
Matches 18; Conservative 2; Mismatches 3; Indels 0; Gaps 0;

QY 1 PINGTNSLTKKVFGGLKKGDIYK 23
   |||||:|||||:|||||:
Db 64 PINGTNSLTKKVFGGLKKGDIYK 86

RESULT 6
US-09-201-458-6
; Sequence 6, Application US/09201458A
; Patent No. 6458942
; GENERAL INFORMATION:
; APPLICANT: Walker, David H.
; APPLICANT: McBride, Jere W.
; APPLICANT: Yu, Xue-Jie
; TITLE OF INVENTION: 28-kDa Immureactive Protein Gene of Ehrlichia
; TITLE OF INVENTION: canis and Uses Thereof
; FILE REFERENCE: D6152
; CURRENT APPLICATION NUMBER: US/09/201,458A
; CURRENT FILING DATE: 1998-11-30
; NUMBER OF SEQ ID NOS: 21
; SEQ ID NO 6
; LENGTH: 283
; TYPE: PRT
; ORGANISM: Ehrlichia chaffeensis
; FEATURE:
; OTHER INFORMATION: amino acid sequence of E. chaffeensis OMP-1B
US-09-201-458-6

Query Match      71.3%; Score 97; DB 4; Length 283;
Best Local Similarity 78.3%; Pred. No. 2.7e-06;
Matches 18; Conservative 2; Mismatches 3; Indels 0; Gaps 0;

QY 1 PINGTNSLTKKVFGGLKKGDIYK 23
   |||||:|||||:|||||:
Db 64 PINGTNSLTKKVFGGLKKGDIYK 86

RESULT 7
US-09-314-701-4
; Sequence 4, Application US/09314701
; Patent No. 6544517

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; GENERAL INFORMATION:
; APPLICANT: Rikihisa, Yasuko
; APPLICANT: Ohasi, No. 654451710
; TITLE OF INVENTION: Outer Membrane Protein of Ehrlichia Canis and Ehrlichia
; TITLE OF INVENTION: Chaffeensis
; FILE REFERENCE: 22727/04021
; CURRENT APPLICATION NUMBER: US/09/314,701
; CURRENT FILING DATE: 1999-05-19
; NUMBER OF SEQ ID NOS: 66
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 4
; LENGTH: 283
; TYPE: PRT
; ORGANISM: Ehrlichia chaffeensis
US-09-314-701-4

Query Match          71.3%; Score 97; DB 4; Length 283;
Best Local Similarity 78.3%; Pred. No. 2.7e-06;
Matches 18; Conservative 2; Mismatches 3; Indels 0; Gaps 0;

Qy 1 PINGNSLTKKVFGKKGDDITK 23
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Db 64 PINGNTSITKKVFGKKGDDIAQ 86

RESULT 8
US-09-811-007A-10
; Sequence 10, Application US/09811007A
; Patent No. 6660269
; GENERAL INFORMATION:
; APPLICANT: Walker, David H.
; APPLICANT: McBride, Jere W.
; APPLICANT: Yu, Xue-Jie
; TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein
; TITLE OF INVENTION: Genes of Ehrlichia canis and Uses Thereof
; FILE REFERENCE: D6152CIP2
; CURRENT APPLICATION NUMBER: US/09/811,007A
; CURRENT FILING DATE: 2001-10-23
; PRIOR FILING DATE: 2000-09-12
; PRIOR FILING DATE: 2000-09-12
; NUMBER OF SEQ ID NOS: 46
; SEQ ID NO 10
; LENGTH: 283
; TYPE: PRT
; ORGANISM: Ehrlichia chaffeensis
; FEATURE:
; OTHER INFORMATION: amino acid sequence of E. chaffeensis OMP-1B
US-09-811-007A-10

Query Match          71.3%; Score 97; DB 4; Length 283;
Best Local Similarity 78.3%; Pred. No. 2.7e-06;
Matches 18; Conservative 2; Mismatches 3; Indels 0; Gaps 0;

Qy 1 PINGNSLTKKVFGKKGDDITK 23
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Db 64 PINGNTSITKKVFGKKGDDIAQ 86

RESULT 9
US-09-134-000C-5909
; Sequence 5909, Application US/09134000C
; Patent No. 6617156
; GENERAL INFORMATION:
; APPLICANT: Lynn Doucette-Stamm et al
; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO
; TITLE OF INVENTION: ENTEROCOCCUS FAECALIS FOR DIAGNOSTICS AND THERAPEUTICS
; FILE REFERENCE: 032796-032
; CURRENT APPLICATION NUMBER: US/09/134,000C
; CURRENT FILING DATE: 1998-08-13
; PRIOR APPLICATION NUMBER: 1998-08-13
; PRIOR FILING DATE: 1997-08-15
; NUMBER OF SEQ ID NOS: 6812
; SOFTWARE: PatentIn version 3.1
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; SEQ ID NO 5909
; LENGTH: 378
; TYPE: PRT
; ORGANISM: Enterococcus faecalis
US-09-134-000C-5909

Query Match          38.2%; Score 52; DB 4; Length 378;
Best Local Similarity 39.1%; Pred. No. 13;
Matches 9; Conservative 6; Mismatches 8; Indels 0; Gaps 0;

Qy 3 NGTNSLTKKVFGKKGDDITK 25
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Db 280 NGTNSITATLTKYKENGVLND 302

RESULT 10
US-09-660-587-15
; Sequence 15, Application US/09660587
; Patent No. 6392023
; GENERAL INFORMATION:
; APPLICANT: Walker, David H.
; APPLICANT: McBride, Jere W.
; APPLICANT: Yu, Xue-Jie
; TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein
; TITLE OF INVENTION: Genes of Ehrlichia canis and Uses Thereof
; FILE REFERENCE: D6152CIP2
; CURRENT APPLICATION NUMBER: US/09/660,587
; CURRENT FILING DATE: 2000-09-12
; PRIOR APPLICATION NUMBER: 09/261,358
; PRIOR FILING DATE: 1999-03-03
; NUMBER OF SEQ ID NOS: 46
; SEQ ID NO 15
; LENGTH: 284
; TYPE: PRT
; ORGANISM: Cowdria ruminantium
; FEATURE:
; OTHER INFORMATION: amino acid sequence of C. ruminantium MAP-1
US-09-660-587-15

Query Match          36.8%; Score 50; DB 3; Length 284;
Best Local Similarity 73.3%; Pred. No. 18;
Matches 11; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

Qy 9 TKKVFGKKGDDITK 23
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Db 63 TKAVFGKKGDDGVK 77

RESULT 11
US-09-261-358A-15
; Sequence 15, Application US/09261358A
; Patent No. 6403780
; GENERAL INFORMATION:
; APPLICANT: Walker, David H.
; APPLICANT: McBride, Jere W.
; APPLICANT: Yu, Xue-Jie
; TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein
; TITLE OF INVENTION: Genes of Ehrlichia canis and Uses Thereof
; FILE REFERENCE: D6152CIP
; CURRENT APPLICATION NUMBER: US/09/261,358A
; CURRENT FILING DATE: 1999-03-03
; PRIOR APPLICATION NUMBER: 09/201,458
; PRIOR FILING DATE: 1998-11-30
; NUMBER OF SEQ ID NOS: 33
; SEQ ID NO 15
; LENGTH: 284
; TYPE: PRT
; ORGANISM: Cowdria ruminantium
; FEATURE:
; OTHER INFORMATION: amino acid sequence of C. ruminantium MAP-1
US-09-261-358A-15

Query Match          36.8%; Score 50; DB 4; Length 284;
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Best Local Similarity 73.3%; Pred. No. 18;
Matches 11; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

Qy 9 TKKVFLGKKGDDITK 23
Db 63 TKAVFGLKDWGDGVK 77

RESULT 12

US-09-201-458-11
; Sequence 11, Application US/09201458A
; Patent No. 6458942
; GENERAL INFORMATION:
; APPLICANT: Walker, David H.
; APPLICANT: McBride, Jere W.
; TITLE OF INVENTION: 28-Kda Immunoreactive Protein Gene of Ehrlichia
; TITLE OF INVENTION: canis and Uses Thereof
; FILE REFERENCE: D6152
; CURRENT APPLICATION NUMBER: US/09/201,458A
; CURRENT FILING DATE: 1998-11-30
; NUMBER OF SEQ ID NOS: 21
; SEQ ID NO 11
; LENGTH: 284
; TYPE: PRT
; ORGANISM: Cowdria ruminantium
; FEATURE:
; OTHER INFORMATION: amino acid sequence of C. ruminantium MAP-1
US-09-201-458-11

Query Match 36.8%; Score 50; DB 4; Length 284;
Best Local Similarity 73.3%; Pred. No. 18;
Matches 11; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

Qy 9 TKKVFLGKKGDDITK 23
Db 63 TKAVFGLKDWGDGVK 77

RESULT 13

US-09-811-007A-15
; Sequence 15, Application US/09811007A
; Patent No. 6660269
; GENERAL INFORMATION:
; APPLICANT: Walker, David H.
; APPLICANT: McBride, Jere W.
; TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein
; TITLE OF INVENTION: Genes of Ehrlichia canis and Uses Thereof
; FILE REFERENCE: D6152CIP2
; CURRENT APPLICATION NUMBER: US/09/811,007A
; CURRENT FILING DATE: 2001-10-23
; PRIOR APPLICATION NUMBER: 09/660,587
; PRIOR FILING DATE: 2000-09-12
; NUMBER OF SEQ ID NOS: 46
; SEQ ID NO 15
; LENGTH: 284
; TYPE: PRT
; ORGANISM: Cowdria ruminantium
; FEATURE:
; OTHER INFORMATION: amino acid sequence of C. ruminantium MAP-1
US-09-811-007A-15

Query Match 36.8%; Score 50; DB 4; Length 284;
Best Local Similarity 73.3%; Pred. No. 18;
Matches 11; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

Qy 9 TKKVFLGKKGDDITK 23
Db 63 TKAVFGLKDWGDGVK 77

RESULT 14

US-10-081-923-6
; Sequence 6, Application US/10081923
; Patent No. 6593093
; GENERAL INFORMATION:
; APPLICANT: Uhl, James R.
; APPLICANT: Cockerill, Franklin R.
; TITLE OF INVENTION: Detection of Group A Streptococcus
; FILE REFERENCE: 07039-306001
; CURRENT APPLICATION NUMBER: US/10/081,923
; CURRENT FILING DATE: 2002-07-02
; NUMBER OF SEQ ID NOS: 17
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 6
; LENGTH: 629
; TYPE: PRT
; ORGANISM: Group A Streptococcus
; FEATURE:
; OTHER INFORMATION: ptai sequence from Oklahoma University M1 strain
; PUBLICATION INFORMATION:
; AUTHORS: Ferretti et al.
; JOURNAL: Proc. Natl. Acad. Sci. USA
; VOLUME: 98
; PAGES: 4658-4663
; DATE: 2001-01-01
US-10-081-923-6

Query Match 36.0%; Score 49; DB 4; Length 629;
Best Local Similarity 55.6%; Pred. No. 64;
Matches 10; Conservative 3; Mismatches 1; Indels 4; Gaps 1;

Qy 4 GTNSLTKKVFLGKKGDI 21
Db 222 GTNDITKRV---KGDV 235

RESULT 15

US-08-621-944A-4
; Sequence 4, Application US/08621944A
; Patent No. 6440425
; GENERAL INFORMATION:
; APPLICANT: SASAKI, Ken
; APPLICANT: HARKNESS, Robin E.
; APPLICANT: LOOSMORE, Sheena M.
; APPLICANT: KLEIN, Michel H.
; TITLE OF INVENTION: HIGH MOLECULAR WEIGHT MAJOR OUTER
; TITLE OF INVENTION: MEMBRANE PROTEIN OF MORAXELLA
; NUMBER OF SEQUENCES: 10
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sim & McBurney
; STREET: Suite 701, 330 University Avenue
; CITY: Toronto
; STATE: Ontario
; COUNTRY: Canada
; ZIP: M5G 1R7
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/621,944A
; FILING DATE: 26-MAR-1996
; CLASSIFICATION:
; PRIOR APPLICATION DATA: US 08/478,370
; APPLICATION NUMBER:
; FILING DATE: 07-JUN-1995
; CLASSIFICATION:
; ATTORNEY/AGENT INFORMATION:
; NAME: Stewart, Michael I
; REGISTRATION NUMBER: 24,973
; REFERENCE/DOCKET NUMBER: 1038-587
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (416) 595-1155

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; TELEFAX: (416) 595-1163
; INFORMATION FOR SEQ ID NO: 4:
; SEQUENCE CHARACTERISTICS:
;   LENGTH: 1833 amino acids
;   TYPE: amino acid
;   STRANDEDNESS: single
;   TOPOLOGY: linear
US-08-621-944A-4

Query Match      36.0%; Score 49; DB 4; Length 1833;
Best Local Similarity 38.1%; Pred. No. 2.2e+02;
Matches 8; Conservative 5; Mismatches 8; Indels 0; Gaps 0;

Qy      4 GTNSLTKKVFLKKDGDITKK 24
Db      271 GTTRITRDKIGFARDGDVDEK 291
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4	136	100.0	280	14	US-10-062-051-42
5	136	100.0	280	14	US-10-062-320-42
6	136	100.0	280	14	US-10-314-639-48
7	136	100.0	280	16	US-10-680-349-42
8	136	100.0	280	16	US-10-731-554-42
9	136	100.0	280	16	US-10-901-714-48
10	136	100.0	280	16	US-10-901-774-48
11	97	71.3	283	9	US-09-845-808-14

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US-10-062-624-42
; Sequence 42, Application US/10062624
; Publication No. US20020115840A1
; GENERAL INFORMATION:
; APPLICANT: Walker, David H.
; APPLICANT: McBride, Jere W.
; APPLICANT: Yu, Xue-Jie
; TITLE OF INVENTION: Homologous 28-Kilodalton Immunodominant Protein
; TITLE OF INVENTION: Genes of Ehrlichia canis and Uses Thereof
; FILE REFERENCE: D6152CIP2/D1
; CURRENT APPLICATION NUMBER: US/10/062,624
; CURRENT FILING DATE: 2002-01-31
; PRIOR APPLICATION NUMBER: 09/660,587
; PRIOR FILING DATE: 2000-09-12
; NUMBER OF SEQ ID NOS: 46
; SEQ ID NO 42
; LENGTH: 280
; TYPE: PRT
; ORGANISM: Ehrlichia canis
; FEATURE:
; OTHER INFORMATION: amino acid sequence of E. canis p28-2 protein
US-10-062-624-42

Query Match      100.0%; Score 136; DB 13; Length 280;
Best Local Similarity 100.0%; Pred. No. 1.3e-11;
Matches 26; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PINGTSLTKKVFGLKKGDIKKDD 26
Db 61 PINGTSLTKKVFGLKKGDIKKDD 86

RESULT 3
US-10-059-964-48
; Sequence 48, Application US/10059964
; Publication No. US20020120115A1
; GENERAL INFORMATION:
; APPLICANT: Rikihisa, Yasuko
; TITLE OF INVENTION: Outer Membrane Protein of Ehrlichia Canis and Ehrlichia
; TITLE OF INVENTION: Chaffensis
; FILE REFERENCE: 22727/04021
; CURRENT APPLICATION NUMBER: US/10/059,964
; CURRENT FILING DATE: 2002-01-28
; EARLIER APPLICATION NUMBER: 09/314,701
; EARLIER FILING DATE: 1999-03-19
; NUMBER OF SEQ ID NOS: 66
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 48
; LENGTH: 280
; TYPE: PRT
; ORGANISM: Ehrlichia canis
; FEATURE:
; OTHER INFORMATION: Homologous 28-kilodalton Immunodominant Protein
US-10-059-964-48

Query Match      100.0%; Score 136; DB 13; Length 280;
Best Local Similarity 100.0%; Pred. No. 1.3e-11;
Matches 26; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PINGTSLTKKVFGLKKGDIKKDD 26
Db 61 PINGTSLTKKVFGLKKGDIKKDD 86

RESULT 4
US-10-062-051-42
; Sequence 42, Application US/10062051
; Publication No. US20030073095A1
; GENERAL INFORMATION:
; APPLICANT: Walker, David H.
; APPLICANT: McBride, Jere W.
; APPLICANT: Yu, Xue-Jie
; TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein
; TITLE OF INVENTION: Genes of Ehrlichia canis and Uses Thereof
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; FILE REFERENCE: D6152CIP2
; CURRENT APPLICATION NUMBER: US/10/062,051
; CURRENT FILING DATE: 2002-01-31
; PRIOR APPLICATION NUMBER: US/09/660,587
; PRIOR FILING DATE: 2000-09-12
; PRIOR APPLICATION NUMBER: 09/261,358
; PRIOR FILING DATE: 1999-03-03
; NUMBER OF SEQ ID NOS: 46
; SEQ ID NO 42
; LENGTH: 280
; TYPE: PRT
; ORGANISM: Ehrlichia canis
; FEATURE:
; OTHER INFORMATION: amino acid sequence of E. canis p28-2 protein
US-10-062-051-42

Query Match      100.0%; Score 136; DB 14; Length 280;
Best Local Similarity 100.0%; Pred. No. 1.3e-11;
Matches 26; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PINGTSLTKKVFGLKKGDIKKDD 26
Db 61 PINGTSLTKKVFGLKKGDIKKDD 86

RESULT 5
US-10-062-920-42
; Sequence 42, Application US/10062920
; Publication No. US20030096250A1
; GENERAL INFORMATION:
; APPLICANT: Walker, David H.
; APPLICANT: McBride, Jere W.
; APPLICANT: Yu, Xue-Jie
; TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein
; TITLE OF INVENTION: Genes of Ehrlichia canis and Uses Thereof
; FILE REFERENCE: D6152CIP2
; CURRENT APPLICATION NUMBER: US/10/062,920
; CURRENT FILING DATE: 2002-01-31
; PRIOR APPLICATION NUMBER: US/09/660,587
; PRIOR FILING DATE: 2000-09-12
; PRIOR APPLICATION NUMBER: 09/261,358
; PRIOR FILING DATE: 1999-03-03
; NUMBER OF SEQ ID NOS: 46
; SEQ ID NO 42
; LENGTH: 280
; TYPE: PRT
; ORGANISM: Ehrlichia canis
; FEATURE:
; OTHER INFORMATION: amino acid sequence of E. canis p28-2 protein
US-10-062-920-42

Query Match      100.0%; Score 136; DB 14; Length 280;
Best Local Similarity 100.0%; Pred. No. 1.3e-11;
Matches 26; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PINGTSLTKKVFGLKKGDIKKDD 26
Db 61 PINGTSLTKKVFGLKKGDIKKDD 86

RESULT 6
US-10-314-639-48
; Sequence 48, Application US/10314639
; Publication No. US20030103991A1
; GENERAL INFORMATION:
; APPLICANT: Rikihisa, Yasuko
; APPLICANT: Ohasi, No. US20030103991A1
; TITLE OF INVENTION: Outer Membrane Protein of Ehrlichia Canis and Ehrlichia
; TITLE OF INVENTION: Chaffensis
; FILE REFERENCE: 22727/04021
; CURRENT APPLICATION NUMBER: US/10/314,639
; CURRENT FILING DATE: 2002-12-09
; PRIOR APPLICATION NUMBER: US/09/314,701
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; PRIOR FILING DATE: 1999-05-19
; NUMBER OF SEQ ID NOS: 66
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 48
; LENGTH: 280
; TYPE: PRT
; ORGANISM: Ehrlichia canis
US-10-314-639-48

Query Match      100.0%; Score 136; DB 14; Length 280;
Best Local Similarity 100.0%; Pred. No. 1.3e-11;
Matches 26; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PINGTNSLTKKVFGGLKKGDDITKKDD 26
Db 61 PINGTNSLTKKVFGGLKKGDDITKKDD 86

RESULT 7
US-10-680-349-42
; Sequence 42, Application US/10680349
; Publication No. US20040198951A1
; GENERAL INFORMATION:
; APPLICANT: Walker, David H.
; APPLICANT: McBride, Jere W.
; TITLE OF INVENTION: Homologous 28-Kilodalton Immunodominant Protein
; FILE REFERENCE: D6152CIP2/D1
; CURRENT APPLICATION NUMBER: US/10/680,349
; PRIOR FILING DATE: 2003-10-07
; PRIOR APPLICATION NUMBER: US/10/062,624
; PRIOR FILING DATE: 2002-01-31
; PRIOR APPLICATION NUMBER: 09/660,587
; PRIOR FILING DATE: 2000-09-12
; NUMBER OF SEQ ID NOS: 46
; SEQ ID NO 42
; LENGTH: 280
; TYPE: PRT
; ORGANISM: Ehrlichia canis
; FEATURE:
; OTHER INFORMATION: amino acid sequence of E. canis p28-2 protein
US-10-680-349-42

Query Match      100.0%; Score 136; DB 16; Length 280;
Best Local Similarity 100.0%; Pred. No. 1.3e-11;
Matches 26; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PINGTNSLTKKVFGGLKKGDDITKKDD 26
Db 61 PINGTNSLTKKVFGGLKKGDDITKKDD 86

RESULT 8
US-10-731-554-42
; Sequence 42, Application US/10731554
; Publication No. US20040247616A1
; GENERAL INFORMATION:
; APPLICANT: Walker, David H.
; APPLICANT: McBride, Jere W.
; TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein
; FILE REFERENCE: D6152CIP2
; CURRENT APPLICATION NUMBER: US/10/731,554
; PRIOR FILING DATE: 2003-12-09
; PRIOR APPLICATION NUMBER: US/09/811,007
; PRIOR FILING DATE: 2001-03-16
; PRIOR APPLICATION NUMBER: 09/660,587
; PRIOR FILING DATE: 2000-09-12
; NUMBER OF SEQ ID NOS: 46
; SEQ ID NO 42
; LENGTH: 280
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; TYPE: PRT
; ORGANISM: Ehrlichia canis
; FEATURE:
; OTHER INFORMATION: amino acid sequence of E. canis p28-2 protein
US-10-731-554-42

Query Match      100.0%; Score 136; DB 16; Length 280;
Best Local Similarity 100.0%; Pred. No. 1.3e-11;
Matches 26; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PINGTNSLTKKVFGGLKKGDDITKKDD 26
Db 61 PINGTNSLTKKVFGGLKKGDDITKKDD 86

RESULT 9
US-10-901-714-48
; Sequence 48, Application US/10901714
; Publication No. US20040265333A1
; GENERAL INFORMATION:
; APPLICANT: RIKIHISA, YASUKO
; APPLICANT: OHASHI, NORIO
; TITLE OF INVENTION: OUTER MEMBRANE PROTEIN OF EHRLICHIA CANIS AND EHRLICHIA
; FILE REFERENCE: 22727-04109
; CURRENT APPLICATION NUMBER: US/10/901,714
; CURRENT FILING DATE: 2004-07-29
; PRIOR APPLICATION NUMBER: 09/314,701
; PRIOR FILING DATE: 1999-05-19
; PRIOR APPLICATION NUMBER: 60/100,843
; PRIOR FILING DATE: 1998-09-18
; NUMBER OF SEQ ID NOS: 69
; SOFTWARE: PatentIn Ver. 3.2
; SEQ ID NO 48
; LENGTH: 280
; TYPE: PRT
; ORGANISM: Ehrlichia canis
; FEATURE:
; OTHER INFORMATION: amino acid sequence of E. canis p28-2 protein
US-10-901-714-48

Query Match      100.0%; Score 136; DB 16; Length 280;
Best Local Similarity 100.0%; Pred. No. 1.3e-11;
Matches 26; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PINGTNSLTKKVFGGLKKGDDITKKDD 26
Db 61 PINGTNSLTKKVFGGLKKGDDITKKDD 86

RESULT 10
US-10-901-774-48
; Sequence 48, Application US/10901774
; Publication No. US20040265334A1
; GENERAL INFORMATION:
; APPLICANT: RIKIHISA, YASUKO
; APPLICANT: OHASHI, NORIO
; TITLE OF INVENTION: OUTER MEMBRANE PROTEIN OF EHRLICHIA CANIS AND EHRLICHIA
; FILE REFERENCE: 22727-04109
; CURRENT APPLICATION NUMBER: US/10/901,774
; CURRENT FILING DATE: 2004-07-29
; PRIOR APPLICATION NUMBER: 09/314,701
; PRIOR FILING DATE: 1999-05-19
; PRIOR APPLICATION NUMBER: 60/100,843
; PRIOR FILING DATE: 1998-09-18
; NUMBER OF SEQ ID NOS: 69
; SOFTWARE: PatentIn Ver. 3.2
; SEQ ID NO 48
; LENGTH: 280
; TYPE: PRT
; ORGANISM: Ehrlichia canis
; FEATURE:
; OTHER INFORMATION: amino acid sequence of E. canis p28-2 protein
US-10-901-774-48

Query Match      100.0%; Score 136; DB 16; Length 280;
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Best Local Similarity 100.0%; Pred. No. 1.3e-11;
Matches 26; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PINGNSLTKKVFGFKKGDITKDD 26
Db 61 PINGNSLTKKVFGFKKGDITKDD 86

RESULT 11

US-09-846-808-14
; Sequence 14, Application US/09846808
; Patent No. US2002064531A1
; GENERAL INFORMATION:
; APPLICANT: Yu, Xue-Jie
; TITLE OF INVENTION: Ehrlichia chaffeensis 28 kDa Outer Membrane
; FILE REFERENCE: D6311
; CURRENT APPLICATION NUMBER: US/09/846,808
; PRIOR FILING DATE: 2001-05-01
; PRIOR APPLICATION NUMBER: 60/201,035
; PRIOR FILING DATE: 2000-05-01
; NUMBER OF SEQ ID NOS: 53
; SEQ ID NO 14
; LENGTH: 283
; TYPE: PRT
; ORGANISM: Ehrlichia chaffeensis
; FEATURE:
; OTHER INFORMATION: P28-14 Outer Membrane Protein of
; OTHER INFORMATION: Ehrlichia chaffeensis
US-09-846-808-14

Query Match 71.3%; Score 97; DB 9; Length 283;
Best Local Similarity 78.3%; Pred. No. 7.1e-06;
Matches 18; Conservative 2; Mismatches 3; Indels 0; Gaps 0;

Qy 1 PINGNSLTKKVFGFKKGDITK 23
Db 64 PINGNSITKKVFGFKKGDIAQ 86

RESULT 12

US-09-811-007-10
; Sequence 10, Application US/09811007
; Publication No. US20030185849A1
; GENERAL INFORMATION:
; APPLICANT: Walker, David H.
; APPLICANT: McBride, Jere W.
; APPLICANT: Yu, Xue-Jie
; TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein
; FILE REFERENCE: D6152CIP2
; CURRENT APPLICATION NUMBER: US/09/811,007
; CURRENT FILING DATE: 2001-03-16
; PRIOR APPLICATION NUMBER: 09/660,587
; PRIOR FILING DATE: 2000-09-12
; NUMBER OF SEQ ID NOS: 46
; SEQ ID NO 10
; LENGTH: 283
; TYPE: PRT
; ORGANISM: Ehrlichia chaffeensis
; FEATURE:
; OTHER INFORMATION: amino acid sequence of E. chaffeensis OMP-18
US-09-811-007-10

Query Match 71.3%; Score 97; DB 10; Length 283;
Best Local Similarity 78.3%; Pred. No. 7.1e-06;
Matches 18; Conservative 2; Mismatches 3; Indels 0; Gaps 0;

Qy 1 PINGNSLTKKVFGFKKGDITK 23
Db 64 PINGNSITKKVFGFKKGDIAQ 86

RESULT 13
US-10-062-624-10
; Sequence 10, Application US/10062624
; Publication No. US20020115840A1
; GENERAL INFORMATION:
; APPLICANT: Walker, David H.
; APPLICANT: McBride, Jere W.
; APPLICANT: Yu, Xue-Jie
; TITLE OF INVENTION: Homologous 28-Kilodalton Immunodominant Protein
; FILE REFERENCE: D6152CIP2/D1
; CURRENT APPLICATION NUMBER: US/10/062,624
; CURRENT FILING DATE: 2002-01-31
; PRIOR APPLICATION NUMBER: 09/660,587
; PRIOR FILING DATE: 2000-09-12
; NUMBER OF SEQ ID NOS: 46
; SEQ ID NO 10
; LENGTH: 283
; TYPE: PRT
; ORGANISM: Ehrlichia chaffeensis
; FEATURE:
; OTHER INFORMATION: amino acid sequence of E. chaffeensis OMP-18
US-10-062-624-10

Query Match 71.3%; Score 97; DB 13; Length 283;
Best Local Similarity 78.3%; Pred. No. 7.1e-06;
Matches 18; Conservative 2; Mismatches 3; Indels 0; Gaps 0;

Qy 1 PINGNSLTKKVFGFKKGDITK 23
Db 64 PINGNSITKKVFGFKKGDIAQ 86

RESULT 14

US-10-059-964-4
; Sequence 4, Application US/10059964
; Publication No. US20020120115A1
; GENERAL INFORMATION:
; APPLICANT: Rikihisa, Yasuko
; APPLICANT: Ohasi, No. US20020120115A1
; TITLE OF INVENTION: Outer Membrane Protein of Ehrlichia Canis and Ehrlichia
; FILE REFERENCE: 22727/04021
; CURRENT APPLICATION NUMBER: US/10/059,964
; CURRENT FILING DATE: 2002-01-28
; EARLIER FILING DATE: 09/314,701
; NUMBER OF SEQ ID NOS: 66
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 4
; LENGTH: 283
; TYPE: PRT
; ORGANISM: Ehrlichia chaffeensis
US-10-059-964-4

Query Match 71.3%; Score 97; DB 13; Length 283;
Best Local Similarity 78.3%; Pred. No. 7.1e-06;
Matches 18; Conservative 2; Mismatches 3; Indels 0; Gaps 0;

Qy 1 PINGNSLTKKVFGFKKGDITK 23
Db 64 PINGNSITKKVFGFKKGDIAQ 86

RESULT 15

US-10-062-051-10
; Sequence 10, Application US/10062051
; Publication No. US20030073095A1
; GENERAL INFORMATION:
; APPLICANT: Walker, David H.
; APPLICANT: McBride, Jere W.
; APPLICANT: Yu, Xue-Jie

; TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein
; TITLE OF INVENTION: Genes of Ehrlichia canis and Uses Thereof
; FILE REFERENCE: D6152CIP2
; CURRENT APPLICATION NUMBER: US/10/062,051
; CURRENT FILING DATE: 2002-01-31
; PRIOR APPLICATION NUMBER: US/09/660,587
; PRIOR FILING DATE: 2000-09-12
; PRIOR APPLICATION NUMBER: 09/261,358
; PRIOR FILING DATE: 1999-03-03
; NUMBER OF SEQ ID NOS: 46
; SEQ ID NO 10
; LENGTH: 283
; TYPE: PRT
; ORGANISM: Ehrlichia chaffeensis
; FEATURE:
; OTHER INFORMATION: amino acid sequence of E. chaffeensis OMP-1B
US-10-062-051-10

Query Match 71.3%; Score 97; DB 14; Length 283;
Best Local Similarity 78.3%; Pred.No. 7.1e-06;
Matches 18; Conservative 2; Mismatches 3; Indels 0; Gaps 0;

Oy 1 PINGTNSLTKKVFGGLKKGDIK 23
||| | : ||||| :
Db 64 PINGNTSITKKVFGGLKKGDIK 86

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OM protein - protein search, using sw model

Run on: August 27, 2005, 08:41:33 ; Search time 35.6863 Seconds
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Title: US-10-680-349-42
Perfect score: 1462
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5: /cgn2_6/ptodata/1/iaa/PCUTUS_COMB.pap.*
6: /cgn2_6/ptodata/1/iaa/backfiles.pap.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	1462	100.0	280	3	US-09-660-587-42
2	1462	100.0	280	4	US-09-314-701-48
3	1462	100.0	280	4	US-09-811-007A-42
4	1202.5	82.3	283	3	US-09-660-587-10
5	1202.5	82.3	283	4	US-09-261-358A-10
6	1202.5	82.3	283	4	US-09-201-458-6
7	1202.5	82.3	283	4	US-09-314-701-4
8	1202.5	82.3	283	4	US-09-811-007A-10
9	644.5	44.1	281	3	US-09-660-587-9
10	644.5	44.1	281	4	US-09-261-358A-9
11	644.5	44.1	281	4	US-09-201-458-5
12	644.5	44.1	281	4	US-09-811-007A-9
13	642.5	43.9	281	4	US-09-314-701-2
14	629.5	43.1	276	3	US-08-953-326-18
15	629.5	43.1	276	4	US-09-553-662-18
16	629.5	43.1	276	4	US-10-062-994-18
17	621	42.5	288	4	US-09-314-701-32
18	620	42.4	286	3	US-08-953-326-15
19	620	42.4	286	3	US-09-660-587-12
20	620	42.4	286	4	US-09-261-358A-12
21	620	42.4	286	4	US-09-201-458-8
22	620	42.4	286	4	US-09-314-701-8
23	620	42.4	286	4	US-09-553-662-15
24	620	42.4	286	4	US-10-062-994-15
25	620	42.4	286	4	US-09-811-007A-12
26	605	41.4	280	3	US-09-660-587-14
27	605	41.4	280	4	US-09-261-358A-14

28	605	41.4	280	4	US-09-201-458-10	Sequence 10, Appl
29	605	41.4	280	4	US-09-314-701-12	Sequence 12, Appl
30	605	41.4	280	4	US-09-811-007A-14	Sequence 14, Appl
31	603	41.2	280	3	US-08-953-326-17	Sequence 17, Appl
32	603	41.2	280	4	US-09-553-662-17	Sequence 17, Appl
33	603	41.2	280	4	US-10-062-994-17	Sequence 17, Appl
34	601	41.1	280	3	US-09-660-587-6	Sequence 6, Appl
35	601	41.1	280	4	US-09-261-358A-6	Sequence 6, Appl
36	601	41.1	280	4	US-09-314-701-38	Sequence 38, Appl
37	601	41.1	280	4	US-09-811-007A-6	Sequence 8, Appl
38	588	40.2	278	3	US-09-660-587-2	Sequence 2, Appl
39	588	40.2	278	4	US-09-261-358A-2	Sequence 2, Appl
40	588	40.2	278	4	US-09-201-458-2	Sequence 2, Appl
41	588	40.2	278	4	US-09-811-007A-2	Sequence 2, Appl
42	588	40.2	307	4	US-09-314-701-36	Sequence 36, Appl
43	587	40.2	285	4	US-09-314-701-30	Sequence 30, Appl
44	583	39.9	278	3	US-08-953-326-16	Sequence 16, Appl
45	583	39.9	278	3	US-09-660-587-13	Sequence 13, Appl

ALIGNMENTS

RESULT 1
US-09-660-587-42
; Sequence 42, Application US/09660587
; Patent No. 6392023
; GENERAL INFORMATION:
; APPLICANT: Walker, David H.
; APPLICANT: McBride, Jere W.
; APPLICANT: Yu, Xue-Jie
; TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein
; TITLE OF INVENTION: Genes of Ehrlichia canis and Uses Thereof
; FILE REFERENCE: D6152C1P2
; CURRENT APPLICATION NUMBER: US/09/660,587
; CURRENT FILING DATE: 2000-09-12
; PRIOR APPLICATION NUMBER: 09/261,358
; PRIOR FILING DATE: 1999-03-03
; NUMBER OF SEQ ID NOS: 46
; SEQ ID NO 42
; LENGTH: 280
; TYPE: PRT
; ORGANISM: Ehrlichia canis
; FEATURE:
; OTHER INFORMATION: amino acid sequence of E. canis p28-2 protein
US-09-660-587-42

Query Match	100.0%;	Score 1462;	DB 3;	Length 280;
Best Local Similarity	100.0%;	Pred. No. 8.2e-151;		
Matches 280;	Conservative 0;	Mismatches 0;	Indels 0;	Gaps 0;
Qy	1	MNYKKILVRSALISILPQSPADPVGSR	TNDNKEGFIYS	AKYNPSISHRKFS
Db	1	MNYKKILVRSALISILPQSPADPVGSR	TNDNKEGFIYS	AKYNPSISHRKFS
Qy	61	PINGTSLTKKVFGLKKDGDITKKDD	FTRVAPGIDFQNNLISG	FGSGISYMDGPRIE
Db	61	PINGTSLTKKVFGLKKDGDITKKDD	FTRVAPGIDFQNNLISG	FGSGISYMDGPRIE
Qy	121	AAVQFNPKNNTDNGEYKHFA	LSRKDAMEDQQYVVLKNDG	ITFMSLWNTCYDIT
Db	121	AAVQFNPKNNTDNGEYKHFA	LSRKDAMEDQQYVVLKNDG	ITFMSLWNTCYDIT
Qy	181	AEGVSFVPYACAGIGADLIITF	KDLNLFKFAVQKIGISY	PTTPRVSFAFIGYHGV
Db	181	AEGVSFVPYACAGIGADLIITF	KDLNLFKFAVQKIGISY	PTTPRVSFAFIGYHGV
Qy	241	FEKIPVITPVVLNDAPQTTS	ASVTLVDVYFGGIGMR	FTF 280
Db	241	FEKIPVITPVVLNDAPQTTS	ASVTLVDVYFGGIGMR	FTF 280

RESULT 2

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US-09-314-701-48
; Sequence 48, Application US/09314701
; Patent No. 6544517
; GENERAL INFORMATION:
; APPLICANT: Rikihisa, Yasuko
; APPLICANT: Ohasi, No. 6544517io
; TITLE OF INVENTION: Outer Membrane Protein of Ehrlichia Canis and Ehrlichia
; TITLE OF INVENTION: Chaffeensis
; FILE REFERENCE: 22727/04021
; CURRENT APPLICATION NUMBER: US/09/314,701
; CURRENT FILING DATE: 1999-05-19
; NUMBER OF SEQ ID NOS: 66
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 48
; LENGTH: 280
; TYPE: PRT
; ORGANISM: Ehrlichia canis
US-09-314-701-48

Query Match      100.0%; Score 1462; DB 4; Length 280;
Best Local Similarity 100.0%; Pred. No. 8.2e-151; Indels 0; Gaps 0;
Matches 280; Conservative 0; Mismatches 0;

Qy 1 MNYKKILVRSALISLSILPYQSPADPVGSRNTDNKEGFYISAKYNPSISHFRKFSAEET 60
Db 1 MNYKKILVRSALISLSILPYQSPADPVGSRNTDNKEGFYISAKYNPSISHFRKFSAEET 60

Qy 61 PINGTNSLTKKVFLGKKGDIITKKDDTRVAPGIDFQNNLISGSGSIGYMDGPRIELE 120
Db 61 PINGTNSLTKKVFLGKKGDIITKKDDTRVAPGIDFQNNLISGSGSIGYMDGPRIELE 120

Qy 121 AAYQQPNPKNTDNDTNGEYKHFALSRKDAMEDQQYVVLKNDGITFMSLMWNTCYDIT 180
Db 121 AAYQQPNPKNTDNDTNGEYKHFALSRKDAMEDQQYVVLKNDGITFMSLMWNTCYDIT 180

Qy 181 AEGVSFVPYACAGIGADLITIFKDLNLKFAYQKGIGISYPIITPEVSFAFISGYYHGVGNK 240
Db 181 AEGVSFVPYACAGIGADLITIFKDLNLKFAYQKGIGISYPIITPEVSFAFISGYYHGVGNK 240

Qy 241 FEKIPVITPVVNLNDAPQTTASVTLDVGYFGGEGIMRFTF 280
Db 241 FEKIPVITPVVNLNDAPQTTASVTLDVGYFGGEGIMRFTF 280

RESULT 3
US-09-811-007A-42
; Sequence 42, Application US/09811007A
; Patent No. 6660269
; GENERAL INFORMATION:
; APPLICANT: Walker, David H.
; APPLICANT: McBride, Jere W.
; APPLICANT: Yu, Xue-jie
; TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein
; TITLE OF INVENTION: Genes of Ehrlichia canis and Uses Thereof
; FILE REFERENCE: D6152CIP2
; CURRENT APPLICATION NUMBER: US/09/811,007A
; CURRENT FILING DATE: 2001-10-23
; PRIOR APPLICATION NUMBER: 09/660,587
; PRIOR FILING DATE: 2000-09-12
; NUMBER OF SEQ ID NOS: 46
; SEQ ID NO 42
; LENGTH: 280
; TYPE: PRT
; ORGANISM: Ehrlichia canis
; FEATURE:
; OTHER INFORMATION: amino acid sequence of E. canis p28-2 protein
US-09-811-007A-42

Query Match      100.0%; Score 1462; DB 4; Length 280;
Best Local Similarity 100.0%; Pred. No. 8.2e-151; Indels 0; Gaps 0;
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Qy 121 AAYQQPNPKNTDNDTNGEYKHFALSRKDAMEDQQYVVLKNDGITFMSLMWNTCYDIT 180
Db 121 AAYQQPNPKNTDNDTNGEYKHFALSRKDAMEDQQYVVLKNDGITFMSLMWNTCYDIT 180
Qy 181 AEGVSFVPYACAGIGADLITIFKDLNLKFAYQKGIGISYPIITPEVSFAFISGYYHGVGNK 240
Db 181 AEGVSFVPYACAGIGADLITIFKDLNLKFAYQKGIGISYPIITPEVSFAFISGYYHGVGNK 240
Qy 241 FEKIPVITPVVNLNDAPQTTASVTLDVGYFGGEGIMRFTF 280
Db 241 FEKIPVITPVVNLNDAPQTTASVTLDVGYFGGEGIMRFTF 280

RESULT 4
US-09-660-587-10
; Sequence 10, Application US/09660587
; Patent No. 6392023
; GENERAL INFORMATION:
; APPLICANT: Walker, David H.
; APPLICANT: McBride, Jere W.
; APPLICANT: Yu, Xue-jie
; TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein
; TITLE OF INVENTION: Genes of Ehrlichia canis and Uses Thereof
; FILE REFERENCE: D6152CIP2
; CURRENT APPLICATION NUMBER: US/09/660,587
; CURRENT FILING DATE: 2000-09-12
; PRIOR APPLICATION NUMBER: 09/261,358
; PRIOR FILING DATE: 1999-03-03
; NUMBER OF SEQ ID NOS: 46
; SEQ ID NO 10
; LENGTH: 283
; TYPE: PRT
; ORGANISM: Ehrlichia chaffeensis
; FEATURE:
; OTHER INFORMATION: amino acid sequence of E. chaffeensis OMP-1b
US-09-660-587-10

Query Match      82.3%; Score 1202.5; DB 3; Length 283;
Best Local Similarity 79.5%; Pred. No. 1.6e-122; Indels 3; Gaps 1;
Matches 225; Conservative 26; Mismatches 29;

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Qy 58 EETPINGTNSLTKKVFLGKKGDIITKKDDTRVAPGIDFQNNLISGSGSIGYMDGPRI 117
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Qy 118 ELEAAAYQQPNPKNTDNDTNGEYKHFALSRKDAMEDQQYVVLKNDGITFMSLMWNTCY 177
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Qy 178 DITAEGVSVFPYACAGIGADLITIFKDLNLKFAYQKGIGISYPIITPEVSFAFISGYYHGV 237
Db 181 DITAEGVFPYACAGIGADLINVFKDFNLKFSYQKGIGISYPIITPEVSFAFISGYYHGV 240

Qy 238 GNFKEKIPVITPVVNLNDAPQTTASVTLDVGYFGGEGIMRFTF 280
Db 241 GNNFNKIPVITPVVLEGAPQTTASVTLDTGTFGGEVGRFTF 283

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US-09-261-358A-10
; Sequence 10, Application US/09261358A
; Patent No. 6403780
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GENERAL INFORMATION:
APPLICANT: Walker, David H.

Db 1 MNYKKVFTSALISLISSLPGVFSFDPAGSGINGN---FYISGKYMPSASHFGVFSAKE - 56

Db 1 MNYKKV FITSALISLISLPGVSFSDPAGSGINGN---FYISGKYMPASASH


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; TITLE OF INVENTION: Animals and Humans
; FILE REFERENCE: UP-167C1
; CURRENT APPLICATION NUMBER: US/08/953,326
; CURRENT FILING DATE: 1997-10-17
; EARLIER APPLICATION NUMBER: 08/953,326
; EARLIER FILING DATE: 1997-10-17
; EARLIER APPLICATION NUMBER: 08/733,230
; EARLIER FILING DATE: 1996-10-17
; NUMBER OF SEQ ID NOS: 24
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 18
; LENGTH: 276
; TYPE: PRT
; ORGANISM: Ehrlichia chaffeensis
US-08-953-326-18

Query Match      43.1%; Score 629.5; DB 3; Length 276;
Best Local Similarity 47.9%; Pred. No. 4.5e-60;
Matches 137; Conservative 41; Mismatches 87; Indels 21; Gaps 6;

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Qy 61 PINGTNSLTKKVFGKKDGD-----ITKKDDFTRVAPGIDFQNNLISGFSGISYMDG 114
Db 57 ----ERNTTVGVLGKQNWGSAISNSPNDVFTVSNYSFKYENNPFLGPAIGAIGYMDG 112
Qy 115 PRIELEAAAYQQFNPKNTDNDTNGEYKHFALSRKDAME-----DOQYVVLKNDGITFMS 170
Db 113 PRIELEVSJETFDVKNGQNN--YKNEAHRYCALSHNSAADMSSASNNFVLKNEGLDIS 170
Qy 171 LMWNTCYDITAEGVSFVPYACAGIGADLITIPKDLNLFKAYQKIGISYPIITPEVSAFIG 230
Db 171 FMLNACYDVVGEIGPFPSPYICAGIGTDLVSMFEATNPKISYQKGLGSLYSISPEASVFIG 230
Qy 231 GYHGVIGNKFEKIPVITPVVLNDAPQ-TTASAVTLDVGVFGGEIG 275
Db 231 GHFHKVIGNEFRDPTIIPGTSLAGKNYPVAILVDVCHFGIEMG 276

RESULT 15
US-09-553-662-18
; Sequence 18 Application US/09553662
; Patent No. 6593147
; GENERAL INFORMATION:
; APPLICANT: Barbet, Anthony F.
; APPLICANT: Bowie, Michael V.
; APPLICANT: Burridge, Michael J.
; APPLICANT: Mahan, Suman M.
; APPLICANT: McGuire, Travis C.
; APPLICANT: Kurangirwa, Fred R.
; APPLICANT: Moreland, Annie L.
; APPLICANT: Simbi, Bigboy H.
; APPLICANT: Whitmire, William M.
; APPLICANT: Alleman, Arthur R.
; TITLE OF INVENTION: Nucleic Acid Vaccines Against Rickettsial Diseases and
; FILE REFERENCE: UP-167XC3
; CURRENT APPLICATION NUMBER: US/09/553,662
; CURRENT FILING DATE: 2000-04-21
; PRIOR APPLICATION NUMBER: 09/337,827
; PRIOR FILING DATE: 1999-06-22
; PRIOR APPLICATION NUMBER: 08/953,326
; PRIOR FILING DATE: 1997-10-17
; PRIOR APPLICATION NUMBER: 08/733,230
; PRIOR FILING DATE: 1996-10-17
; NUMBER OF SEQ ID NOS: 34
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 18
; LENGTH: 276
; TYPE: PRT
; ORGANISM: Ehrlichia chaffeensis
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US-09-553-662-18

Query Match      43.1%; Score 629.5; DB 4; Length 276;
Best Local Similarity 47.9%; Pred. No. 4.5e-60;
Matches 137; Conservative 41; Mismatches 87; Indels 21; Gaps 6;

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Qy 61 PINGTNSLTKKVFGKKDGD-----ITKKDDFTRVAPGIDFQNNLISGFSGISYMDG 114
Db 57 ----ERNTTVGVLGKQNWGSAISNSPNDVFTVSNYSFKYENNPFLGPAIGAIGYMDG 112
Qy 115 PRIELEAAAYQQFNPKNTDNDTNGEYKHFALSRKDAME-----DOQYVVLKNDGITFMS 170
Db 113 PRIELEVSJETFDVKNGQNN--YKNEAHRYCALSHNSAADMSSASNNFVLKNEGLDIS 170
Qy 171 LMWNTCYDITAEGVSFVPYACAGIGADLITIPKDLNLFKAYQKIGISYPIITPEVSAFIG 230
Db 171 FMLNACYDVVGEIGPFPSPYICAGIGTDLVSMFEATNPKISYQKGLGSLYSISPEASVFIG 230
Qy 231 GYHGVIGNKFEKIPVITPVVLNDAPQ-TTASAVTLDVGVFGGEIG 275
Db 231 GHFHKVIGNEFRDPTIIPGTSLAGKNYPVAILVDVCHFGIEMG 276

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Job time : 36.6863 secs
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GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: August 27, 2005, 08:41:37 ; Search time 198.562 Seconds
(without alignments)
554.080 Million cell updates/sec

Title: US-10-680-349-42
Perfect score: 1462
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Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 1767149 seqs, 392926209 residues

Total number of hits satisfying chosen parameters: 1767149

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

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Database : Published Applications AA:*

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- 11: /cgn2_6/ptodata/1/pubpaa/US09C_PUBCOMB.pep.*
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- 13: /cgn2_6/ptodata/1/pubpaa/US10A_PUBCOMB.pep.*
- 14: /cgn2_6/ptodata/1/pubpaa/US10B_PUBCOMB.pep.*
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- 22: /cgn2_6/ptodata/1/pubpaa/US60_PUBCOMB.pep.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
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2	1462	100.0	280	13	US-10-062-624-42
3	1462	100.0	280	13	US-10-059-964-48
4	1462	100.0	280	14	US-10-062-051-42
5	1462	100.0	280	14	US-10-062-920-42
6	1462	100.0	280	14	US-10-314-639-48
7	1462	100.0	280	16	US-10-680-349-42
8	1462	100.0	280	16	US-10-731-554-42
9	1462	100.0	280	16	US-10-901-714-48
10	1462	100.0	280	16	US-10-901-774-48
11	1202.5	82.3	283	9	US-09-846-808-14

12	1202.5	82.3	283	10	US-09-811-007-10
13	1202.5	82.3	283	13	US-10-062-624-10
14	1202.5	82.3	283	13	US-10-059-964-4
15	1202.5	82.3	283	14	US-10-062-051-10
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23	1202.5	82.3	283	16	US-10-901-714-4
24	1202.5	82.3	283	16	US-10-901-774-4
25	644.5	44.1	281	9	US-09-846-808-19
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32	644.5	44.1	281	14	US-10-285-042-19
33	644.5	44.1	281	16	US-10-680-349-9
34	644.5	44.1	281	16	US-10-731-554-9
35	642.5	43.9	281	13	US-10-059-964-2
36	642.5	43.9	281	14	US-10-314-639-2
37	642.5	43.9	281	16	US-10-901-714-2
38	642.5	43.9	281	16	US-10-901-774-2
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41	629.5	43.1	276	13	US-10-062-994-18
42	629.5	43.1	276	13	US-10-062-994-18
43	629.5	43.1	276	16	US-10-722-077-18
44	621	42.5	288	13	US-10-059-964-32
45	621	42.5	288	14	US-10-314-639-32

ALIGNMENTS

RESULT 1
US-09-811-007-42
; Sequence 42, Application US/09811007
; Publication No. US20030185849A1
; GENERAL INFORMATION:
; APPLICANT: Walker, David H.
; APPLICANT: McBride, Jere W.
; APPLICANT: Yu, Xue-Jie
; TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein
; FILE REFERENCE: D6152CIP2
; CURRENT FILING DATE: 2001-03-16
; PRIOR APPLICATION NUMBER: US/09/811.007
; PRIOR FILING DATE: 2000-09-12
; NUMBER OF SEQ ID NOS: 46
; SEQ ID NO 42
; LENGTH: 280
; TYPE: PRT
; ORGANISM: Ehrlichia canis
; FEATURE:
; OTHER INFORMATION: amino acid sequence of E. canis p28-2 protein
US-09-811-007-42

Query Match 100.0%; Score 1462; DB 10; Length 280;
Best Local Similarity 100.0%; Pred. No 9.3e-136;
Matches 280; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MNYKKILVRSALISLMSILPQSPADPVGSRITNDNKEGFYISAKYNPSISHFRKFSAEET 60
Db 1 MNYKKILVRSALISLMSILPQSPADPVGSRITNDNKEGFYISAKYNPSISHFRKFSAEET 60
Qy 61 PINGTSLTKVFLKGGDITKDDTRVAPGIDFQNNLISGSGSIGYSMDGPRIELE 120
|||||

Db 61 PINGTNSLTKKVFLGKKDGDITKKDDFTRVAPGIDFQNNLISFGSGSIGYMDGPRIELE 120
QY 121 AAYQQFNPKNNTDNGEYKHFALSRKDAMEDQQYVVLKNDGITFMSLMWNTCYDIT 180
Db 121 AAYQQFNPKNNTDNGEYKHFALSRKDAMEDQQYVVLKNDGITFMSLMWNTCYDIT 180
QY 181 AEGVSFVPYACAGIGADLITIFKDLNLKFAVQKGIGISYPTTPRVSFAFICYGYYHGVGNK 240
Db 181 AEGVSFVPYACAGIGADLITIFKDLNLKFAVQKGIGISYPTTPRVSFAFICYGYYHGVGNK 240
QY 241 FEKIPVITPVVLNDAPQTTSASVTLDVGYFGGEGIMRFTF 280
Db 241 FEKIPVITPVVLNDAPQTTSASVTLDVGYFGGEGIMRFTF 280

RESULT 2

US-10-062-624-42
; Sequence 42, Application US/10062624
; Publication No. US20020115840A1
; GENERAL INFORMATION:
; APPLICANT: Walker, David H.
; APPLICANT: McBride, Jere W.
; APPLICANT: Yu, Xue-Jie
; TITLE OF INVENTION: Homologous 28-Kilodalton Immunodominant Protein
; FILE REFERENCE: D6152CIP2/D1
; CURRENT APPLICATION NUMBER: US/10/062,624
; PRIOR FILING DATE: 2002-01-31
; PRIOR APPLICATION NUMBER: 09/660,587
; NUMBER OF SEQ ID NOS: 46
; SEQ ID NO 42
; LENGTH: 280
; TYPE: PRT
; ORGANISM: Ehrlichia canis
; FEATURE:
; OTHER INFORMATION: amino acid sequence of E. canis p28-2 protein
US-10-062-624-42

Query Match 100.0%; Score 1462; DB 13; Length 280;
Best Local Similarity 100.0%; Pred. No. 9.3e-136;
Matches 280; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 MNYKKILVRSALISLMSILPYQSFADPVGSRRTNDNKEGFYISAKYNPSISHFRKFSAEET 60
Db 1 MNYKKILVRSALISLMSILPYQSFADPVGSRRTNDNKEGFYISAKYNPSISHFRKFSAEET 60
QY 61 PINGTNSLTKKVFLGKKDGDITKKDDFTRVAPGIDFQNNLISFGSGSIGYMDGPRIELE 120
Db 61 PINGTNSLTKKVFLGKKDGDITKKDDFTRVAPGIDFQNNLISFGSGSIGYMDGPRIELE 120
QY 121 AAYQQFNPKNNTDNGEYKHFALSRKDAMEDQQYVVLKNDGITFMSLMWNTCYDIT 180
Db 121 AAYQQFNPKNNTDNGEYKHFALSRKDAMEDQQYVVLKNDGITFMSLMWNTCYDIT 180
QY 181 AEGVSFVPYACAGIGADLITIFKDLNLKFAVQKGIGISYPTTPRVSFAFICYGYYHGVGNK 240
Db 181 AEGVSFVPYACAGIGADLITIFKDLNLKFAVQKGIGISYPTTPRVSFAFICYGYYHGVGNK 240
QY 241 FEKIPVITPVVLNDAPQTTSASVTLDVGYFGGEGIMRFTF 280
Db 241 FEKIPVITPVVLNDAPQTTSASVTLDVGYFGGEGIMRFTF 280

RESULT 3

US-10-059-964-48
; Sequence 48, Application US/10059964
; Publication No. US20020120115A1
; GENERAL INFORMATION:
; APPLICANT: Rikihisa, Yasuko
; APPLICANT: Ohashi, No. US20020120115A1io
; TITLE OF INVENTION: Outer Membrane Protein of Ehrlichia Canis and Ehrlichia
; OTHER INFORMATION: Chaffeensis

; FILE REFERENCE: 22727/04021
; CURRENT APPLICATION NUMBER: US/10/059,964
; EARLIER FILING DATE: 2002-01-28
; EARLIER APPLICATION NUMBER: 09/314,701
; NUMBER OF SEQ ID NOS: 66
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 48
; LENGTH: 280
; TYPE: PRT
; ORGANISM: Ehrlichia canis
US-10-059-964-48

Query Match 100.0%; Score 1462; DB 13; Length 280;
Best Local Similarity 100.0%; Pred. No. 9.3e-136;
Matches 280; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 MNYKKILVRSALISLMSILPYQSFADPVGSRRTNDNKEGFYISAKYNPSISHFRKFSAEET 60
Db 1 MNYKKILVRSALISLMSILPYQSFADPVGSRRTNDNKEGFYISAKYNPSISHFRKFSAEET 60
QY 61 PINGTNSLTKKVFLGKKDGDITKKDDFTRVAPGIDFQNNLISFGSGSIGYMDGPRIELE 120
Db 61 PINGTNSLTKKVFLGKKDGDITKKDDFTRVAPGIDFQNNLISFGSGSIGYMDGPRIELE 120
QY 121 AAYQQFNPKNNTDNGEYKHFALSRKDAMEDQQYVVLKNDGITFMSLMWNTCYDIT 180
Db 121 AAYQQFNPKNNTDNGEYKHFALSRKDAMEDQQYVVLKNDGITFMSLMWNTCYDIT 180
QY 181 AEGVSFVPYACAGIGADLITIFKDLNLKFAVQKGIGISYPTTPRVSFAFICYGYYHGVGNK 240
Db 181 AEGVSFVPYACAGIGADLITIFKDLNLKFAVQKGIGISYPTTPRVSFAFICYGYYHGVGNK 240
QY 241 FEKIPVITPVVLNDAPQTTSASVTLDVGYFGGEGIMRFTF 280
Db 241 FEKIPVITPVVLNDAPQTTSASVTLDVGYFGGEGIMRFTF 280

RESULT 4

US-10-062-051-42
; Sequence 42, Application US/10062051
; Publication No. US20030073095A1
; GENERAL INFORMATION:
; APPLICANT: Walker, David H.
; APPLICANT: McBride, Jere W.
; APPLICANT: Yu, Xue-Jie
; TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein
; FILE REFERENCE: D6152CIP2
; CURRENT APPLICATION NUMBER: US/10/062,051
; PRIOR FILING DATE: 2002-01-31
; PRIOR APPLICATION NUMBER: US/09/660,587
; PRIOR FILING DATE: 2000-09-12
; PRIOR APPLICATION NUMBER: 09/261,358
; PRIOR FILING DATE: 1999-03-03
; NUMBER OF SEQ ID NOS: 46
; SEQ ID NO 42
; LENGTH: 280
; TYPE: PRT
; ORGANISM: Ehrlichia canis
; FEATURE:
; OTHER INFORMATION: amino acid sequence of E. canis p28-2 protein
US-10-062-051-42

Query Match 100.0%; Score 1462; DB 14; Length 280;
Best Local Similarity 100.0%; Pred. No. 9.3e-136;
Matches 280; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 MNYKKILVRSALISLMSILPYQSFADPVGSRRTNDNKEGFYISAKYNPSISHFRKFSAEET 60
Db 1 MNYKKILVRSALISLMSILPYQSFADPVGSRRTNDNKEGFYISAKYNPSISHFRKFSAEET 60
QY 61 PINGTNSLTKKVFLGKKDGDITKKDDFTRVAPGIDFQNNLISFGSGSIGYMDGPRIELE 120

Db 61 PINGTNSLTKKVFLGKKDGDITKKDDFTRVAPGIDFQNNLISGSGSIGYMDGPRIELE 120
Qy 121 AAYQQFNPKNNTDNDNGEYKHFALSRKDAMEDQQYVVLKNDGITFMSLMWNTCYDIT 180
Db 121 AAYQQFNPKNNTDNDNGEYKHFALSRKDAMEDQQYVVLKNDGITFMSLMWNTCYDIT 180
Qy 181 AEGVSFVPYACAGIGADLITIFKDLNLKFAYQKGIGISYPTITPEVSFAFIGYHGVGNK 240
Db 181 AEGVSFVPYACAGIGADLITIFKDLNLKFAYQKGIGISYPTITPEVSFAFIGYHGVGNK 240
Qy 241 FEKIPVITPVVLNDAPQTTSASVTLVDVGYFGGEGIGMRFTF 280
Db 241 FEKIPVITPVVLNDAPQTTSASVTLVDVGYFGGEGIGMRFTF 280

RESULT 5
US-10-062-920-42
; Sequence 42, Application US/10062920
; Publication No. US20030096250A1
; GENERAL INFORMATION:
; APPLICANT: Walker, David H.
; APPLICANT: McBride, Jere W.
; APPLICANT: Yu, Xue-Jie
; TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein
; FILE REFERENCE: D6152CIP2
; CURRENT APPLICATION NUMBER: US/10/062,920
; PRIOR FILING DATE: 2002-01-31
; PRIOR APPLICATION NUMBER: US/09/660,587
; PRIOR FILING DATE: 2000-09-12
; PRIOR APPLICATION NUMBER: 09/261,358
; PRIOR FILING DATE: 1999-03-03
; NUMBER OF SEQ ID NOS: 46
; SEQ ID NO 42
; LENGTH: 280
; TYPE: PRT
; ORGANISM: Ehrlichia canis
; FEATURE:
; OTHER INFORMATION: amino acid sequence of E. canis p28-2 protein
US-10-062-920-42

Query Match 100.0%; Score 1462; DB 14; Length 280;
Best Local Similarity 100.0%; Pred. No. 9.3e-136;
Matches 280; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Qy 1 MNYKKILVRSALISLMSILPYQSFADPVGSRNTDNKEGFIYSAKYNPSISHFRKFSAEET 60
Db 1 MNYKKILVRSALISLMSILPYQSFADPVGSRNTDNKEGFIYSAKYNPSISHFRKFSAEET 60
Qy 61 PINGTNSLTKKVFLGKKDGDITKKDDFTRVAPGIDFQNNLISGSGSIGYMDGPRIELE 120
Db 61 PINGTNSLTKKVFLGKKDGDITKKDDFTRVAPGIDFQNNLISGSGSIGYMDGPRIELE 120
Qy 121 AAYQQFNPKNNTDNDNGEYKHFALSRKDAMEDQQYVVLKNDGITFMSLMWNTCYDIT 180
Db 121 AAYQQFNPKNNTDNDNGEYKHFALSRKDAMEDQQYVVLKNDGITFMSLMWNTCYDIT 180
Qy 181 AEGVSFVPYACAGIGADLITIFKDLNLKFAYQKGIGISYPTITPEVSFAFIGYHGVGNK 240
Db 181 AEGVSFVPYACAGIGADLITIFKDLNLKFAYQKGIGISYPTITPEVSFAFIGYHGVGNK 240
Qy 241 FEKIPVITPVVLNDAPQTTSASVTLVDVGYFGGEGIGMRFTF 280
Db 241 FEKIPVITPVVLNDAPQTTSASVTLVDVGYFGGEGIGMRFTF 280

RESULT 6
US-10-314-639-48
; Sequence 48, Application US/10314639
; Publication No. US20030103991A1
; GENERAL INFORMATION:
; APPLICANT: Rikihisa, Yasuko

; APPLICANT: Ohasi, No. US20030103991A1io
; TITLE OF INVENTION: Outer Membrane Protein of Ehrlichia Canis and Ehrlichia
; FILE REFERENCE: 22727/04021
; CURRENT APPLICATION NUMBER: US/10/314,639
; CURRENT FILING DATE: 2002-12-09
; PRIOR APPLICATION NUMBER: US/09/314,701
; PRIOR FILING DATE: 1999-05-19
; NUMBER OF SEQ ID NOS: 66
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 48
; LENGTH: 280
; TYPE: PRT
; ORGANISM: Ehrlichia canis
; US-10-314-639-48

Query Match 100.0%; Score 1462; DB 14; Length 280;
Best Local Similarity 100.0%; Pred. No. 9.3e-136;
Matches 280; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Qy 1 MNYKKILVRSALISLMSILPYQSFADPVGSRNTDNKEGFIYSAKYNPSISHFRKFSAEET 60
Db 1 MNYKKILVRSALISLMSILPYQSFADPVGSRNTDNKEGFIYSAKYNPSISHFRKFSAEET 60
Qy 61 PINGTNSLTKKVFLGKKDGDITKKDDFTRVAPGIDFQNNLISGSGSIGYMDGPRIELE 120
Db 61 PINGTNSLTKKVFLGKKDGDITKKDDFTRVAPGIDFQNNLISGSGSIGYMDGPRIELE 120
Qy 121 AAYQQFNPKNNTDNDNGEYKHFALSRKDAMEDQQYVVLKNDGITFMSLMWNTCYDIT 180
Db 121 AAYQQFNPKNNTDNDNGEYKHFALSRKDAMEDQQYVVLKNDGITFMSLMWNTCYDIT 180
Qy 181 AEGVSFVPYACAGIGADLITIFKDLNLKFAYQKGIGISYPTITPEVSFAFIGYHGVGNK 240
Db 181 AEGVSFVPYACAGIGADLITIFKDLNLKFAYQKGIGISYPTITPEVSFAFIGYHGVGNK 240
Qy 241 FEKIPVITPVVLNDAPQTTSASVTLVDVGYFGGEGIGMRFTF 280
Db 241 FEKIPVITPVVLNDAPQTTSASVTLVDVGYFGGEGIGMRFTF 280

RESULT 7
US-10-680-349-42
; Sequence 42, Application US/10680349
; Publication No. US20040198951A1
; GENERAL INFORMATION:
; APPLICANT: Walker, David H.
; APPLICANT: McBride, Jere W.
; APPLICANT: Yu, Xue-Jie
; TITLE OF INVENTION: Homologous 28-Kilodalton Immunodominant Protein
; FILE REFERENCE: D6152CIP2/D1
; CURRENT APPLICATION NUMBER: US/10/680,349
; CURRENT FILING DATE: 2003-10-07
; PRIOR APPLICATION NUMBER: US/10/062,624
; PRIOR FILING DATE: 2002-01-31
; PRIOR APPLICATION NUMBER: 09/660,587
; PRIOR FILING DATE: 2000-09-12
; NUMBER OF SEQ ID NOS: 46
; SEQ ID NO 42
; LENGTH: 280
; TYPE: PRT
; ORGANISM: Ehrlichia canis
; FEATURE:
; OTHER INFORMATION: amino acid sequence of E. canis p28-2 protein
US-10-680-349-42

Query Match 100.0%; Score 1462; DB 16; Length 280;
Best Local Similarity 100.0%; Pred. No. 9.3e-136;
Matches 280; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Qy 1 MNYKKILVRSALISLMSILPYQSFADPVGSRNTDNKEGFIYSAKYNPSISHFRKFSAEET 60
Db 1 MNYKKILVRSALISLMSILPYQSFADPVGSRNTDNKEGFIYSAKYNPSISHFRKFSAEET 60

Db 1 MNYKKILVRSAISLSILPYQSFADPVGSRRTNDNKEGFYISAKYNPSISHPRKFSAAET 60
QY 61 PINGTNSLTKKVFLGKKGDDITKKDDFTTRVAPGIDFQNNLISGFSIGYSMDGPRIELE 120
Db 61 PINGTNSLTKKVFLGKKGDDITKKDDFTTRVAPGIDFQNNLISGFSIGYSMDGPRIELE 120
QY 121 AAYQQFNPKNTDNDTNGEYKHFALSRKADAMEDQQYVVLKNDGITFMSLMWNTCYDIT 180
Db 121 AAYQQFNPKNTDNDTNGEYKHFALSRKADAMEDQQYVVLKNDGITFMSLMWNTCYDIT 180
QY 181 AEGVSFVPYACAGIGADLIITFKDLNLKFAYQKIGISYPIITPEVSFAFIGGYVHGVI 240
Db 181 AEGVSFVPYACAGIGADLIITFKDLNLKFAYQKIGISYPIITPEVSFAFIGGYVHGVI 240
QY 241 FEKIPVITPVVLNDAPQTTSASVTLVDVGYFGGIGMRFTF 280
Db 241 FEKIPVITPVVLNDAPQTTSASVTLVDVGYFGGIGMRFTF 280

RESULT 8
US-10-731-554-42
; Sequence 42, Application US/10731554
; Publication No. US20040247616A1
; GENERAL INFORMATION:
; APPLICANT: Walker, David H.
; APPLICANT: McBride, Jere W.
; APPLICANT: Yu, Xue-Jie
; TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein
; FILE REFERENCE: D6152CIP2
; CURRENT APPLICATION NUMBER: US/10/731,554
; CURRENT FILING DATE: 2003-12-09
; PRIOR FILING DATE: 2001-03-16
; PRIOR FILING DATE: 2000-09-12
; NUMBER OF SEQ ID NOS: 46
; SEQ ID NO 42
; LENGTH: 280
; TYPE: PRT
; ORGANISM: Ehrlichia canis
; FEATURE:
; OTHER INFORMATION: amino acid sequence of E. canis p28-2 protein
US-10-731-554-42

Query Match 100.0%; Score 1462; DB 16; Length 280;
Best Local Similarity 100.0%; Pred. No. 9.3e-136;
Matches 280; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 MNYKKILVRSAISLSILPYQSFADPVGSRRTNDNKEGFYISAKYNPSISHPRKFSAAET 60
Db 1 MNYKKILVRSAISLSILPYQSFADPVGSRRTNDNKEGFYISAKYNPSISHPRKFSAAET 60
QY 61 PINGTNSLTKKVFLGKKGDDITKKDDFTTRVAPGIDFQNNLISGFSIGYSMDGPRIELE 120
Db 61 PINGTNSLTKKVFLGKKGDDITKKDDFTTRVAPGIDFQNNLISGFSIGYSMDGPRIELE 120
QY 121 AAYQQFNPKNTDNDTNGEYKHFALSRKADAMEDQQYVVLKNDGITFMSLMWNTCYDIT 180
Db 121 AAYQQFNPKNTDNDTNGEYKHFALSRKADAMEDQQYVVLKNDGITFMSLMWNTCYDIT 180
QY 181 AEGVSFVPYACAGIGADLIITFKDLNLKFAYQKIGISYPIITPEVSFAFIGGYVHGVI 240
Db 181 AEGVSFVPYACAGIGADLIITFKDLNLKFAYQKIGISYPIITPEVSFAFIGGYVHGVI 240
QY 241 FEKIPVITPVVLNDAPQTTSASVTLVDVGYFGGIGMRFTF 280
Db 241 FEKIPVITPVVLNDAPQTTSASVTLVDVGYFGGIGMRFTF 280

RESULT 9
US-10-901-714-48
; Sequence 48, Application US/10901714

; Publication No. US20040265333A1
; GENERAL INFORMATION:
; APPLICANT: RIKIHISA, YASUKO
; APPLICANT: OHASHI, NORIO
; TITLE OF INVENTION: OUTER MEMBRANE PROTEIN OF EHRLICHIA CANIS AND EHRLICHIA
; FILE REFERENCE: CHAFFEENSIS
; CURRENT APPLICATION NUMBER: US/10/901,714
; CURRENT FILING DATE: 2004-07-29
; PRIOR APPLICATION NUMBER: 09/314,701
; PRIOR FILING DATE: 1999-05-19
; PRIOR APPLICATION NUMBER: 60/100,843
; PRIOR FILING DATE: 1998-09-18
; NUMBER OF SEQ ID NOS: 69
; SOFTWARE: PatentIn Ver. 3.2
; SEQ ID NO 48
; LENGTH: 280
; TYPE: PRT
; ORGANISM: Ehrlichia canis
US-10-901-714-48

Query Match 100.0%; Score 1462; DB 16; Length 280;
Best Local Similarity 100.0%; Pred. No. 9.3e-136;
Matches 280; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 MNYKKILVRSAISLSILPYQSFADPVGSRRTNDNKEGFYISAKYNPSISHPRKFSAAET 60
Db 1 MNYKKILVRSAISLSILPYQSFADPVGSRRTNDNKEGFYISAKYNPSISHPRKFSAAET 60
QY 61 PINGTNSLTKKVFLGKKGDDITKKDDFTTRVAPGIDFQNNLISGFSIGYSMDGPRIELE 120
Db 61 PINGTNSLTKKVFLGKKGDDITKKDDFTTRVAPGIDFQNNLISGFSIGYSMDGPRIELE 120
QY 121 AAYQQFNPKNTDNDTNGEYKHFALSRKADAMEDQQYVVLKNDGITFMSLMWNTCYDIT 180
Db 121 AAYQQFNPKNTDNDTNGEYKHFALSRKADAMEDQQYVVLKNDGITFMSLMWNTCYDIT 180
QY 181 AEGVSFVPYACAGIGADLIITFKDLNLKFAYQKIGISYPIITPEVSFAFIGGYVHGVI 240
Db 181 AEGVSFVPYACAGIGADLIITFKDLNLKFAYQKIGISYPIITPEVSFAFIGGYVHGVI 240
QY 241 FEKIPVITPVVLNDAPQTTSASVTLVDVGYFGGIGMRFTF 280
Db 241 FEKIPVITPVVLNDAPQTTSASVTLVDVGYFGGIGMRFTF 280

RESULT 10
US-10-901-774-48
; Sequence 48, Application US/10901774
; Publication No. US20040265334A1
; GENERAL INFORMATION:
; APPLICANT: RIKIHISA, YASUKO
; APPLICANT: OHASHI, NORIO
; TITLE OF INVENTION: OUTER MEMBRANE PROTEIN OF EHRLICHIA CANIS AND EHRLICHIA
; FILE REFERENCE: CHAFFEENSIS
; CURRENT APPLICATION NUMBER: US/10/901,774
; CURRENT FILING DATE: 2004-07-29
; PRIOR APPLICATION NUMBER: 09/314,701
; PRIOR FILING DATE: 1999-05-19
; PRIOR APPLICATION NUMBER: 60/100,843
; PRIOR FILING DATE: 1998-09-18
; NUMBER OF SEQ ID NOS: 69
; SOFTWARE: PatentIn Ver. 3.2
; SEQ ID NO 48
; LENGTH: 280
; TYPE: PRT
; ORGANISM: Ehrlichia canis
US-10-901-774-48

Query Match 100.0%; Score 1462; DB 16; Length 280;
Best Local Similarity 100.0%; Pred. No. 9.3e-136;
Matches 280; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MNYKKILVRSALISLMSILPYQSFADPVGSRNDNKGFGYISAKYNPSISHFRKFSABET 60
Db 1 MNYKKILVRSALISLMSILPYQSFADPVGSRNDNKGFGYISAKYNPSISHFRKFSABET 60
Qy 61 PINGTNSITKKVFGGLKKGDDITKKDDTRVAPGIDFQNNLISGSGSIGYMDGPRIELE 120
Db 61 PINGTNSITKKVFGGLKKGDDITKKDDTRVAPGIDFQNNLISGSGSIGYMDGPRIELE 120
Qy 121 AAYQQFNPKNNDNDTNGEYKHFALSRKDMEDQQVVLKNDGITFMSLMVNTCYDIT 180
Db 121 AAYQQFNPKNNDTNGEYKHFALSRKDMEDQQVVLKNDGITFMSLMVNTCYDIT 180
Qy 181 AEGVSVFPYACAGGADLITTFKDLNLKFAVQKIGISYPTTPVPSAFIGGYHGVGNK 240
Db 181 AEGVSVFPYACAGGADLITTFKDLNLKFAVQKIGISYPTTPVPSAFIGGYHGVGNK 240
Qy 241 FEKIPVITPVVLDNAPQTTASVTLDVGYFGGEGMRFTF 280
Db 241 FEKIPVITPVVLDNAPQTTASVTLDVGYFGGEGMRFTF 280

RESULT 11

US-09-846-808-14
; Sequence 14, Application US/09846808
; Patent No. US20020064531A1
; GENERAL INFORMATION:
; APPLICANT: Walker, David H.
; APPLICANT: Yu, Xu-Jie
; TITLE OF INVENTION: Ehrlichia chaffeensis 28 kDa Outer Membrane
; TITLE OF INVENTION: Protein Multigene Family
; FILE REFERENCE: D6311
; CURRENT APPLICATION NUMBER: US/09/846.808
; PRIOR FILING DATE: 2001-05-01
; PRIOR APPLICATION NUMBER: 60/201,035
; PRIOR FILING DATE: 2000-05-01
; NUMBER OF SEQ ID NOS: 53
; SEQ ID NO 14
; LENGTH: 283
; TYPE: PRT
; ORGANISM: Ehrlichia chaffeensis
; FEATURE:
; OTHER INFORMATION: P28-14 Outer Membrane Protein of
; OTHER INFORMATION: Ehrlichia chaffeensis
US-09-846-808-14

Query Match 82.3%; Score 1202.5; DB 9; Length 283;
Best Local Similarity 79.5%; Pred. No. 4.2e-110;
Matches 225; Conservative 26; Mismatches 29; Indels 3; Gaps 1;
Qy 1 MNYKKILVRSALISLMSILPYQSFADPVGSR---TNDNKEGFIYSKYNPSISHFRKFS 57
Db 1 MNYKKIFVSSALISLMSILPYQSFADPVTSNDTGINDSRGFIYSVKYNPSISHFRKFS 60
Qy 58 EETPINGTNSITKKVFGGLKKGDDITKKDDTRVAPGIDFQNNLISGSGSIGYMDGPRI 117
Db 61 EAPINGNTSITKKVFGGLKKGDDIAQSANFNRTDPALEFQNNLISGSGSIGYAMDGPRI 120
Qy 118 ELEAAVQFNPKNNDNDTNGEYKHFALSRKDMEDQQVVLKNDGITFMSLMVNTCY 177
Db 121 ELEAAVQFNPKNNDNDTNGEYKHFALSRKDMEDQQVVLKNDGITFMSLMVNTCY 180
Qy 178 DITAEVSVFPYACAGGADLITTFKDLNLKFAVQKIGISYPTTPVPSAFIGGYHGV 237
Db 181 DITAEVSVFPYACAGGADLITTFKDLNLKFAVQKIGISYPTTPVPSAFIGGYHGV 240
Qy 238 GNKFEKIPVITPVVLDNAPQTTASVTLDVGYFGGEGMRFTF 280
Db 241 GNNFNKIPVITPVVLDNAPQTTASVTLDVGYFGGEGMRFTF 283

RESULT 12

US-09-811-007-10

; Sequence 10, Application US/09811007
; Publication No. US20030185849A1
; GENERAL INFORMATION:
; APPLICANT: Walker, David H.
; APPLICANT: McBride, Jere W.
; APPLICANT: Yu, Xu-Jie
; TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein
; TITLE OF INVENTION: Genes of Ehrlichia canis and Uses Thereof
; FILE REFERENCE: D6152CIP2
; CURRENT APPLICATION NUMBER: US/09/811,007
; CURRENT FILING DATE: 2001-03-16
; PRIOR APPLICATION NUMBER: 09/660,587
; PRIOR FILING DATE: 2000-09-12
; NUMBER OF SEQ ID NOS: 46
; SEQ ID NO 10
; LENGTH: 283
; TYPE: PRT
; ORGANISM: Ehrlichia chaffeensis
; FEATURE:
; OTHER INFORMATION: amino acid sequence of E. chaffeensis OMP-1B
US-09-811-007-10

Query Match 82.3%; Score 1202.5; DB 10; Length 283;
Best Local Similarity 79.5%; Pred. No. 4.2e-110;
Matches 225; Conservative 26; Mismatches 29; Indels 3; Gaps 1;
Qy 1 MNYKKILVRSALISLMSILPYQSFADPVGSR---TNDNKEGFIYSKYNPSISHFRKFS 57
Db 1 MNYKKIFVSSALISLMSILPYQSFADPVTSNDTGINDSRGFIYSVKYNPSISHFRKFS 60
Qy 58 EETPINGTNSITKKVFGGLKKGDDITKKDDTRVAPGIDFQNNLISGSGSIGYMDGPRI 117
Db 61 EAPINGNTSITKKVFGGLKKGDDIAQSANFNRTDPALEFQNNLISGSGSIGYAMDGPRI 120
Qy 118 ELEAAVQFNPKNNDNDTNGEYKHFALSRKDMEDQQVVLKNDGITFMSLMVNTCY 177
Db 121 ELEAAVQFNPKNNDNDTNGEYKHFALSRKDMEDQQVVLKNDGITFMSLMVNTCY 180
Qy 178 DITAEVSVFPYACAGGADLITTFKDLNLKFAVQKIGISYPTTPVPSAFIGGYHGV 237
Db 181 DITAEVSVFPYACAGGADLITTFKDLNLKFAVQKIGISYPTTPVPSAFIGGYHGV 240
Qy 238 GNKFEKIPVITPVVLDNAPQTTASVTLDVGYFGGEGMRFTF 280
Db 241 GNNFNKIPVITPVVLDNAPQTTASVTLDVGYFGGEGMRFTF 283

RESULT 13

US-10-062-624-10
; Sequence 10, Application US/10062624
; Publication No. US20020115840A1
; GENERAL INFORMATION:
; APPLICANT: Walker, David H.
; APPLICANT: McBride, Jere W.
; APPLICANT: Yu, Xu-Jie
; TITLE OF INVENTION: Homologous 28-Kilodalton Immunodominant Protein
; TITLE OF INVENTION: Genes of Ehrlichia canis and Uses Thereof
; FILE REFERENCE: D6152CIP2/D1
; CURRENT APPLICATION NUMBER: US/10/062,624
; CURRENT FILING DATE: 2002-01-31
; PRIOR APPLICATION NUMBER: 09/660,587
; PRIOR FILING DATE: 2000-09-12
; NUMBER OF SEQ ID NOS: 46
; SEQ ID NO 10
; LENGTH: 283
; TYPE: PRT
; ORGANISM: Ehrlichia chaffeensis
; FEATURE:
; OTHER INFORMATION: amino acid sequence of E. chaffeensis OMP-1B
US-10-062-624-10

Query Match 82.3%; Score 1202.5; DB 13; Length 283;

Best Local Similarity 79.5%; Pred. No. 4.2e-110;

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Matches 225; Conservative 26; Mismatches 29; Indels 3; Gaps 1;
QY 1 MNYKKILVRSALISLMSILPYQSFADPVGSR---TNDNKEGFYISAKYNPSISHFRKFS 57
Db 1 MNYKKIFVSSALISLMSILPYQSFADPVTSNDTGINDSREGFYISVKYNPSISHFRKFS 60
QY 58 EETPINGTSLTKKVFGLKKGDDITKKDDFTRVAPGIDFQNNLISGFSGISYMDGPRI 117
Db 61 EEPINGNTSITKKVFGLKKGDDIAQANFNRTDPALEFQNNLISGFSGISYAMDGPRI 120
QY 118 ELEAAVQFNPKNNTDNGEYKHFALSRKDMEDQQYVVLKNDGITFMSLMVNTCY 177
Db 121 ELEAAVQKFDKPNNDNTSGDYKYFGLSREDIAADKKYVVLKNEGITFMSLMVNTCY 180
QY 178 DITAEGVSFVPYACAGIGADLITIFKDLNLKFAYQKGIGISYIPITPEVSAFIGYHGVI 237
Db 181 DITAEGVPFIPYACAGVGADLINVFKDNLKFSYQKGIGISYIPITPEVSAFIGYHGVI 240
QY 238 GKNFEKIPVITPVVNLNDAPQTTSASVTLVDVGYFGGEGMRFTF 280
Db 241 GNNFNKIPVITPVVLEGAPQTTSALVTIDTGYFGGEGVGRFTF 283

RESULT 14
US-10-059-964-4
; Publication No. US20020120115A1
; GENERAL INFORMATION:
; APPLICANT: Rikihisa, Yasuko
; TITLE OF INVENTION: Outer Membrane Protein of Ehrlichia Canis and Ehrlichia
; FILE REFERENCE: 22727/04021
; CURRENT APPLICATION NUMBER: US/10/059,964
; EARLIER FILING DATE: 2002-01-28
; EARLIER FILING DATE: 1999-05-19
; NUMBER OF SEQ ID NOS: 66
; SOFTWARE: Patent In Ver. 2.0
; SEQ ID NO 4
; LENGTH: 283
; TYPE: PRT
; ORGANISM: Ehrlichia chaffeensis
US-10-059-964-4
Query Match 82.3%; Score 1202.5; DB 13; Length 283;
Best Local Similarity 79.5%; Pred. No. 4.2e-110;
Matches 225; Conservative 26; Mismatches 29; Indels 3; Gaps 1;
QY 1 MNYKKILVRSALISLMSILPYQSFADPVGSR---TNDNKEGFYISAKYNPSISHFRKFS 57
Db 1 MNYKKIFVSSALISLMSILPYQSFADPVTSNDTGINDSREGFYISVKYNPSISHFRKFS 60
QY 58 EETPINGTSLTKKVFGLKKGDDITKKDDFTRVAPGIDFQNNLISGFSGISYMDGPRI 117
Db 61 EEPINGNTSITKKVFGLKKGDDIAQANFNRTDPALEFQNNLISGFSGISYAMDGPRI 120
QY 118 ELEAAVQFNPKNNTDNGEYKHFALSRKDMEDQQYVVLKNDGITFMSLMVNTCY 177
Db 121 ELEAAVQKFDKPNNDNTSGDYKYFGLSREDIAADKKYVVLKNEGITFMSLMVNTCY 180
QY 178 DITAEGVSFVPYACAGIGADLITIFKDLNLKFAYQKGIGISYIPITPEVSAFIGYHGVI 237
Db 181 DITAEGVPFIPYACAGVGADLINVFKDNLKFSYQKGIGISYIPITPEVSAFIGYHGVI 240
QY 238 GKNFEKIPVITPVVNLNDAPQTTSASVTLVDVGYFGGEGMRFTF 280
Db 241 GNNFNKIPVITPVVLEGAPQTTSALVTIDTGYFGGEGVGRFTF 283
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RESULT 15
US-10-062-051-10
; Sequence 10, Application US/10062051
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; Publication No. US20030073095A1
; GENERAL INFORMATION:
; APPLICANT: Walker, David H.
; APPLICANT: McBride, Jere W.
; APPLICANT: Yu, Xue-Jie
; TITLE OF INVENTION: Homologous 28-kilodalton Immunodominant Protein
; TITLE OF INVENTION: Genes of Ehrlichia canis and Uses Thereof
; FILE REFERENCE: D6152CIP2
; CURRENT APPLICATION NUMBER: US/10/062,051
; CURRENT FILING DATE: 2002-01-31
; PRIOR APPLICATION NUMBER: US/09/660,587
; PRIOR FILING DATE: 2000-09-12
; PRIOR APPLICATION NUMBER: 09/261,358
; PRIOR FILING DATE: 1999-03-03
; NUMBER OF SEQ ID NOS: 46
; SEQ ID NO 10
; TYPE: PRT
; ORGANISM: Ehrlichia chaffeensis
; FEATURE:
; OTHER INFORMATION: amino acid sequence of E. chaffeensis OMP-1B
US-10-062-051-10
Query Match 82.3%; Score 1202.5; DB 14; Length 283;
Best Local Similarity 79.5%; Pred. No. 4.2e-110;
Matches 225; Conservative 26; Mismatches 29; Indels 3; Gaps 1;
QY 1 MNYKKILVRSALISLMSILPYQSFADPVGSR---TNDNKEGFYISAKYNPSISHFRKFS 57
Db 1 MNYKKIFVSSALISLMSILPYQSFADPVTSNDTGINDSREGFYISVKYNPSISHFRKFS 60
QY 58 EETPINGTSLTKKVFGLKKGDDITKKDDFTRVAPGIDFQNNLISGFSGISYMDGPRI 117
Db 61 EEPINGNTSITKKVFGLKKGDDIAQANFNRTDPALEFQNNLISGFSGISYAMDGPRI 120
QY 118 ELEAAVQFNPKNNTDNGEYKHFALSRKDMEDQQYVVLKNDGITFMSLMVNTCY 177
Db 121 ELEAAVQKFDKPNNDNTSGDYKYFGLSREDIAADKKYVVLKNEGITFMSLMVNTCY 180
QY 178 DITAEGVSFVPYACAGIGADLITIFKDLNLKFAYQKGIGISYIPITPEVSAFIGYHGVI 237
Db 181 DITAEGVPFIPYACAGVGADLINVFKDNLKFSYQKGIGISYIPITPEVSAFIGYHGVI 240
QY 238 GKNFEKIPVITPVVNLNDAPQTTSASVTLVDVGYFGGEGMRFTF 280
Db 241 GNNFNKIPVITPVVLEGAPQTTSALVTIDTGYFGGEGVGRFTF 283
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